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THE

READY REFERENCE HANDBOOK

OF

DISEASES OF THE SKIN.

BY

GEORGE THOMAS JACKSON, M. D. (Col.), 1852 - ?

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WITH 80 ILLUSTRATIONS AND 3 PLATES.

FOURTH EDITION, THOROUGHLY REVISED.

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PREFACE TO FOURTH EDITION.

It is a source of satisfaction that a new edition has so soon been called for. The author has spared no effort to keep this work abreast of its subject at the date of each revision, and the public has done its full share in affording frequent opportunities of this kind. It is hoped that the book shows the benefit of this benign cycle in its increasing adaptation to the needs of both students and practitioners.

New sections have been added on Acne keratosa, Acne urticata, Caraté, Craw-craw, Endothelioma, Erythrodermie pityriasique en plaques disseminées, Fordyce's disease of the lips, Granuloma necrotica, Impetigo of Bockhardt, Lichen annularis, Lichen pilaris, Pityriasis lichenoides chronica, and Verruga Peruana.

It will be noticed that in spite of the new subject-matter the book has not increased in size. This is due to the careful pruning of the old text, and the omission of pronunciations, a step taken because at present there is no generally recognized standard in regard to many of the names used; and also because a dictionary is really the proper place in which to look for them.

Five new illustrations have been added, for which the author renders his thanks to his friends Drs. George H. Fox and S. Dana Hubbard.

G. T. J.

14 East Thirty-first Street,
New York, July, 1901.

PREFACE TO FIRST EDITION.

THE following pages are intended to present the art of dermatology as it now exists. No attempt has been made to discuss debatable questions. Hence pathology and etiology do not receive as full consideration as symptomatology, diagnosis, and treatment.

The alphabetical arrangement of the different diseases has been adopted for convenience of ready reference. It is hoped that the large number of titles from foreign languages will prove as acceptable as it is novel. I would impress upon the reader the fact that in the prescriptions given no attempt has been made to translate grains, drachms, and ounces into their precise equivalents in grammes, but simply to preserve the relative percentages of the ingredients in the old formulæ and express them in decimals. The decimals may be regarded as either grammes or parts.

It gives me pleasure to acknowledge in this place and always my great obligations to my friends, Drs. George Henry Fox, Edward Bennett Bronson, and Robert William Taylor. To the first two I owe much of whatever knowledge of dermatology I may possess, and from all of them I have received many of those kindly courtesies that make a professional life worth living.

I would also acknowledge my indebtedness to Dr. A.

THE SKIN.

ERATIONS.

OF THE SKIN.

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Rupp for special contributions upon eczema and furuncles of the ear, and to all those workers in dermatology from whose writings I have drawn freely so as to make this little book a presentation of modern dermatology. The admirable text-book of Dr. H. R. Crocker, of London, has been specially consulted by me, and has guided me through many difficulties.

Messrs. William Wood & Co. and D. Appleton & Co. have most courteously permitted me to make use of some papers of mine published in *The Medical Record*, *The New York Medical Journal*, and *The Journal of Cutaneous and Genito-Urinary Diseases* during the past years.

G. T. J.

14 East Thirty-first Street,
New York, August, 1892.

DISEASES OF THE SKIN.

PART I.

GENERAL CONSIDERATIONS.

Anatomy and Physiology of the Skin.

Before we enter upon the consideration of the separate diseases of the skin it will be well for us to refresh our memory as to its anatomy. It is not my desire to give a complete and exhaustive chapter on this subject, but to draw attention to those properties of the cutaneous envelope that are of practical importance to us.

The skin is composed of three distinct layers, namely: 1, the epidermis; 2, the derma, also named the cutis vera, or corium; and, 3, the subcutaneous connective tissue. The appendages of the skin are the hair, the nails, the sebaceous and the sweat glands. This complicated structure is supplied with blood vessels, lymphatics, and nerves.

Epidermis. The epidermis is composed of four layers, called strata, namely: 1, the stratum corneum; 2, the stratum lucidum; 3, the stratum granulosum; and, 4, the stratum mucosum. Of these strata, the two that most concern us are the first and the last—that is, the stratum corneum and the stratum mucosum. The other layers of the skin may, for our present purpose, be regarded as simply transition-layers through which an epithelial cell passes on its developmental way to become a fully formed and rightly compacted corneous cell. Each of the four strata of the epidermis is divided again into layers, but these are of no practical importance. The thickness of the epidermis varies greatly, being thickest and most com-

FIG. 1.

Vertical section through the skin. Diagrammatic. (After HEITZMANN.)

pact where it is subjected to the most pressure of intermittent character, as on the palms and soles.

The *stratum corneum* consists of a series of superimposed

layers of flattened, elongated cells that increase in flatness from below upward. The upper layers are called scales. The cells of each layer are united to each other so much closer than the layer itself is united to those above and below it that when an effusion takes place into the stratum corneum a layer of cells in the affected area is raised and the fluid is found between two layers. The lamellated scaling met with in certain scaly diseases, such as dermatitis exfoliativa, in which great plates of scales are readily removable, is likewise due to this close relation between the cells of each layer. This stratum is largely a protective one, its compactness affording a fair degree of resistance to injury of the underlying, more succulent layers of the epidermis.

The *stratum mucosum* is the deepest layer of the epidermis, and is seated upon the papillary layer of the corium. It is composed of several layers of cells, but may be considered as consisting of two chief layers, namely, the columnar epithelium and the prickle cells. The columnar epithelial cells are arranged perpendicularly to the papillæ of the corium, while the prickle cells, which are polygonal in shape with spherical nuclei and with little filaments running out from their sides toward the neighboring cells, are arranged in strata over them. As the stratum granulosum, which lies above the stratum mucosum, is approached the prickle cells become flatter, and finally lie with their long axis parallel to the general surface. The "granules" contain eleidin (Ranvier) and keratohyalin (Waldeyer), the former being a solid and the latter a fluid substance. The stratum mucosum, also called the rete Malpighii, is the most important stratum of the epidermis, and the seat of that most common of all skin diseases, eczema. From its lower part it sends down projections between the papillæ of the corium, which are called interpapillary projections. Most of the pigment of the skin is situated in the lower part of the stratum mucosum. As the upper part is approached less and less pigment is found. The pigment itself is in the form of granules and of diffused coloring-matter. According to Unna, the pigment is found even in the upper part of this layer, while in path-

ological conditions it may be located in the corium. In the so-called colored races pigment is always found in the corium, and even the horny layer is stained.

From this arrangement of the cells of the epidermis it will be seen that nutrient fluids can readily work upward from below by means of the little channels formed by the interlacing of the filaments running between the cells.

The epidermis has no blood vessels. It receives its nutrition entirely from the corium. Though there are no true lymphatics in the epidermis, there are abundant lymph spaces between the cells that take their place. Nerves of the non-medullated variety have been traced between the cells of the epidermis, and have been described by some histologists as entering into the cells to end at the nucleus, though not to enter it. The final distribution of the nerves in the epidermis is not yet fully determined.

Corium. The corium is composed of white fibrous and yellow connective tissue, disposed in horizontal bundles above and in oblique bundles below. It is a very dense and tough tissue, and is pierced in all directions to allow of the passage of blood vessels, lymphatics, sweat ducts, and nerves, and affords lodgement for the hair follicles and sebaceous glands. It contains a considerable amount of elastic fibers. The upper part has been named the *pars papillaris*, and the lower part the *pars reticularis corii*. From its upper part it sends off a vast number of projections called *papillæ*. These vary in length, being longest and most marked on the ends of the fingers and toes. The epidermis follows these projections and dips down between them. They are readily seen as parallel markings on the ends of the fingers. Over most of the body surface the papillæ are but slightly raised, and merely give a wavy appearance to the upper edge of the corium when viewed under the microscope. A fine basement-membrane separates the corium from the epidermis. This is regarded by some as a cement-substance. As the lower part of the corium is reached the bundles of fibers are less closely crowded together, and becoming successively looser gradually pass over into the

Subcutaneous connective tissue. This is a loose connective tissue with large and small spaces in it, which are filled with adipose tissue. This consists of fat-cells collected into lobulated masses that in some cases have about them a connective-tissue sheath. Each lobule is supplied with an afferent artery, a capillary plexus about it, and efferent veins. This part of the skin is called the *panniculus adiposus*, and is found everywhere except in the skin of the penis, scrotum, labia minora, eyelids, pinna, and beneath the nails. It contributes to the roundness and beauty of the body, besides acting as a storehouse for fuel against such times as the body cannot gain its proper nutriment from food, as in fevers. It also gives lodgement to the coil or sweat glands, and aids in protecting the underlying parts from injury. The lower ends of the deep hair follicles are also in this part of the skin. The subcutaneous tissue merges into the underlying fasciæ of the muscles and the periosteum of the bones. Under the name of *columnæ adiposæ* J. C. Warren has described certain prolongations of fatty tissue running up to the bases of the hair follicles. They are important in relation to the pathology of carbuncle.

Blood Vessels. The arteries which supply the skin come up from below to form a horizontal plexus in the subcutaneous tissue, from which the vessels proceed perpendicularly through the corium to form a second horizontal plexus just below the papillæ. From the lower plexus small branches pass to the fat-cells, sweat glands, and, according to Unna, to the hair papillæ. From the upper plexus branches are given off which enter the papillæ of the skin. There are also branches to the hair follicles, sebaceous glands, and the tissue of the corium itself. Papillæ that give lodgement to a tactile corpuscle have no arterial twig. The veins follow the same course as the arteries, but, of course, in the opposite direction.

Lymphatics. Lymph vessels are large in the subcutaneous tissue, smaller in the upper part of the corium, and form plexuses. "Juice-spaces," filled with lymph, are found abundantly in the epidermis and papillæ, about

the glands of the skin, and around the muscles of the skin and the connective-tissue bundles and fat-lobules.

NERVES. The skin is provided with both medullated and non-medullated nerve-fibers and motor and vasomotor nerves. We have learned already that non-medullated nerve-fibers have been traced between the cells of the epidermis, some terminating at, if not in, the nuclei of the cells. It may be roughly stated that the nerves follow pretty much the same arrangement as the blood vessels, forming a sort of plexus beneath the papillæ and then giving off branches to the vessels, to the tactile corpuscles, to the papillæ, the hair follicles, the sebaceous and the sweat glands, and the epidermis.

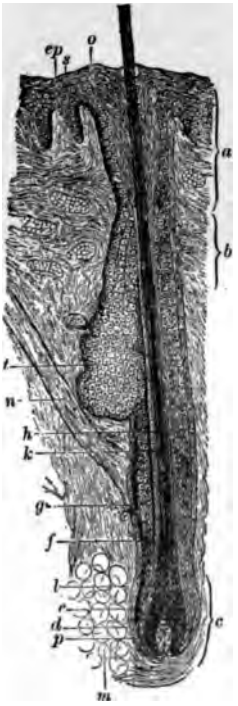
The *tactile corpuscles* (corpuscles of Meissner) are located in the papillæ. They are oval or round bodies, and their long axis runs longitudinally. Not more than one papilla in four is supplied with one of these corpuscles, even where they are most abundant—on the end of the index finger. They are composed, according to Unna, of large, flat connective-tissue cells, which are placed one above the other like money-rolls, and take up between them the terminal branches of the medullated nerves, which on entering the bodies lose their medulla and finally end between the cells. The transversely striped appearance presented by the corpuscles is due to the swollen lateral edges of the cells and the band-like nerve-fibers that here and there appear upon the surface.

The *corpuscles of Krause* are located in the sensory mucous membranes. They are rounded in shape and bear a close resemblance to the Pacinian corpuscles in structure.

The *Pacinian corpuscles* are located in the subcutaneous tissues, and also in connection with the sensitive nerves. They are oval in form, visible to the naked eye, and consist in a colossal swelling-out of the sheath of Schwann, forming a thick connective-tissue capsule surrounding a much smaller cylindrical cavity filled with granular, faintly filamentous cellular substance, through the axis of which passes a sensitive nerve. As the latter enters the corpuscle it loses its medulla, and either terminates in

the corpuscle or passes through it to enter one or more corpuscles. These corpuscles are most abundant in the fingers and toes and the palms and soles. They are supposed to enable us to appreciate pressure or traction.

FIG. 2.



Hair in follicle. (After KAPOSI.)

a. Follicle mouth. *b*. Neck. *c*. Arch of follicle. *d*. Outer, *e*. inner sheath of follicle. *p*. Hair papilla. *m*. Fat-cells. *n*. Erector pili muscle. *ep*. Epidermis. *s*. Mucous layer of epidermis. *o*. Skin papillæ. *l*. Sebaceous glands. *f*. External, *g*. internal root sheath. *h*. Cortex of hair. *k*. Medullary canal. *l*. Hair root.

HAIR. The hair is an epidermic structure which grows from a nipple-shaped projection, the *hair papilla*, situated at the bottom of a deep, slender pocket or sac-like depression in the skin which is called the *hair follicle*. Com-

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mencing at the papilla it is bulb-shaped. This part is called the *bulb* and fits over the papilla like a cap. On leaving the papilla the body of the hair is first called the *root*, and then as it becomes narrower the *shaft*. The diameter of the shaft rapidly decreases until, leaving the skin, it terminates in the *point*. A fully formed hair is hollow, its central cavity being called the *medullary canal* and filled with the *medulla*. This is composed of a column of cells arranged in layers, one layer being superimposed on another. The main substance of the hair is called the *cortex*, and consists of long, spindle-shaped epithelial cells flattened out into fine bands which run in the long axis of the hair. This part of the hair gives it substance and strength, and in it is placed the pigment that determines the color of the hair. The outer layer of the hair is called the *cuticle*. It corresponds to the epidermis and consists of flattened, non-nucleated, fully cornified cells which cover the hair like scales and overlap each other like shingles.

The *hair follicle* is located for the most part in the corium, but in some very strong hairs it reaches down into the subcutaneous tissue. It is always, excepting at the dorsal edge of the eyelids, placed at an angle to the skin, and is a permanent structure that is not removed when the hair is plucked. It is composed of three layers, which are derived from the corium as it dips down to form the follicle. Between the follicle and the hair is the *root sheath*, which is derived from the epidermis. It is composed of two layers, which are called the external and the internal root sheaths. The whole arrangement of the hair and its sheath may be graphically conceived by regarding the hair as a blunt needle pressed against the skin. The needle would form the hair, the epidermis would form the root sheath, and the corium would be to the outside of all and form the hair follicle.

Hair is found on all parts of the body excepting the palms and soles, the terminal phalanges of the fingers and toes, the glans penis, prepuce, labia minora, and the vermilion border of the lips. In form it is flattened or rounded, straight or curled. There are three main varieties

of hair: 1. Long, soft hair, as of the head and beard. 2. Short, stiff hair, as of the eyebrows and eyelashes; and, 3. Lanugo, or soft, downy, colorless hair that is scattered all over the surface of the body where the other varieties are not.

NAILS. The nails, like the hair, are epidermic structures. They are placed on the extensor surfaces of the terminal phalanges of the fingers and toes. Their proximal end is called the *root*, under which is the *matrix*, from which they grow. On the way to their distal end they pass over the *nail bed*. This is separated from the matrix by a more or less convex and apparent line called the *lunula*. At their posterior and lateral margins they are imbedded in a fold of skin that is called the *nail fold*. At their distal extremity they are separated from the end of the finger or toe. They are formed by the matrix, but in passing over the bed they receive a certain amount of nourishment from it, and their cells become rapidly cornified. They are slightly curved from side to side, being convex above and concave below, and are marked with fine lines. The flesh beneath the nail is the same as the skin in general, though without subcutaneous tissue. The nail takes the place of the corneous and granular layers of the skin. It has been estimated that it takes from one hundred and eight to one hundred and sixty-one days for a finger nail to grow from the lunula to the free edge, the rate of growth being more rapid in summer than in winter. It has been noted that in a case of fracture of a limb the nails of the fingers or toes may cease growing until the bone is well knit.

SEBACEOUS GLANDS. (Fig. 1.) These glands are of the racemose variety, and are closely related to the hairs, from two to six being attached to each hair, emptying by their ducts into the upper third of the follicle. Each gland is composed of a number of acini that empty by a common duct. They are composed of a delicate, structureless capsule, the *membrana propria*, which continues along the duct to merge into the hair follicles. This is lined with large, though short, cubical or cylindrical epithelial cells arranged in one or two rows. These are continuous through the duct with the cylindrical cells of

the outer root sheath of the hair and of the skin. The interior of the glands is filled with fatty secretion. Around the glands passes the external layer of the hair follicle. These glands occur also on the vermilion border of the lips, the labia minora, and the glans penis and prepuce, though in these locations there are no hairs.

The function of the sebaceous glands is to oil the hair and skin, thus rendering them soft and supple, and giving luster to the hair. This oily secretion is produced by the cells, which, as they reach the central part of the acini, undergo fatty degeneration. The glands are largest in the nose, cheeks, scrotum, mons veneris, labia, and about the anus.

SWEAT GLANDS. (Fig. 1.) The sweat glands are simple coil glands that are located in the lower part of the corium and in the subcutaneous tissue. Their ducts ascend through the corium in a straight or wavy line to the interpapillary spaces, where they enter the epidermis. The cells lining the coil are simple cubical epithelial cells. These are seated upon muscular fibers; and a connective tissue, the membrana propria, comes outside of all. An abundant network of blood vessels surrounds each gland and sends off branches to its interior. The glands are also richly supplied with nerves. The duct is made up of pavement-epithelium upon the membrana propria. When the epidermis is reached the membrana propria is lost, and the further tract of the duct seems to be made by the sweat working its own channel up between the epidermic cells. The duct ends as a rounded aperture on the surface of the skin that is called a sweat pore. Unna teaches that the sweat produced by the coil glands is mixed with other elements while passing through the epidermis, so that the secretion that appears at the sweat pores is not the same as that which leaves the coils. He further teaches that the office of the coil glands is not to produce sweat, but to oil the skin. This theory still needs confirmation before it can be accepted as proven. His arguments have considerable weight, but space will not allow of their statement here. It has long been known that there was a certain amount of oil in the sweat. Sweat glands are most numer-

ous in the palms and soles. Their diameter is from 0.3 to 0.4 mm. The largest are in the axillæ, where they have a diameter of 2 to 7 mm. and are very numerous. In the external meatus of the ear they secrete the so-called ear wax.

MUSCLES. The skin is provided with muscles, both of the striated and unstriated variety. The striated muscles are found in the face and nose. The majority of the muscles of the skin are involuntary muscles. In the scrotum they run parallel with the raphé. On the penis and about the nipple their direction is circular. The *arrectores pilorum* muscles are found all over the body, running in a more or less oblique direction from the bottom of several papillæ down and around a sebaceous gland to be attached to the bottom of a hair follicle. By contracting they raise the hairs to a perpendicular position and aid in pressing out the contents of the sebaceous glands.

DIAGNOSIS.

THE LESIONS OF THE SKIN. We speak of *primary* and *secondary lesions* of the skin. By the first of these terms we mean the form assumed by the efflorescence at its first appearance. By the second of these terms we mean the subsequent changes the primary lesion undergoes of itself, or as the result of extraneous causes acting upon it. In running its course, whether influenced by treatment or not, almost every disease of the skin exhibits more than one lesion, and we can only speak of it as a macular, papular, or other disease from its most prominent and characteristic lesion.

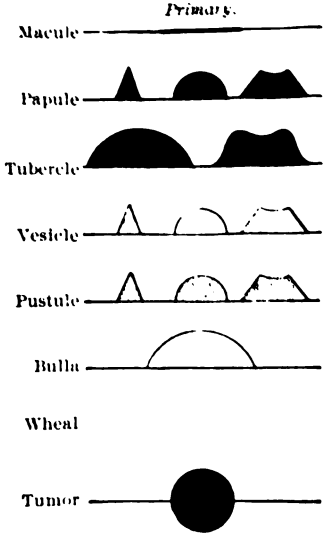
The primary lesions of the skin are the macule, the papule, the tubercle, the vesicle, the pustule, the bulla, the wheal, and the tumor. The secondary lesions of the skin are the crust, the scale, the excoriation, the fissure, the ulcer, and the cicatrix. These may be graphically represented, following Piffard.[1]

PRIMARY LESIONS. A *macule* is a spot or stain of the skin which is not raised above its surface. It may be of any size from that of a pin-point to that of the palm of the

[1] Cutaneous Memoranda. Wood, N. Y., 1885.

hand, or larger. Large-sized and diffused, non-elevated lesions are usually spoken of as patches. A macule is usually round, but may be of any shape. It may be white, red, brown, black, blue, pink, or yellow, according to its cause. It may be due to hyperæmia, as in erythema simplex; to a change in the pigmentation of the skin, as in lentigo and chloasma, where there is increase of pigmentation, or in vitiligo, where there is decrease of pigmentation; to a hemorrhage into the skin, as in purpura; to a

FIG. 3.



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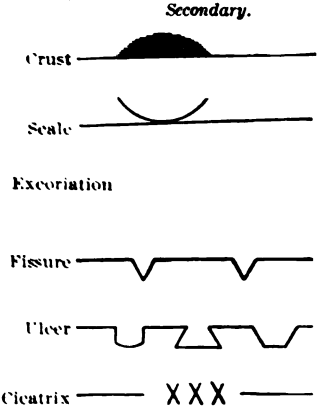


development of blood vessels in the skin, as in nævus vascularis and telangiectasis; to a parasitic growth in the skin, as in chromophytosis; or to a change in the consistency of the skin, as in morphœa and xanthoma.

The macule may be evanescent or permanent; may remain as a macule during its existence, or may give place to a papule, vesicle, or pustule. It is the simplest of all lesions of the skin, and is met with as a primary lesion in many diseases.

The principal macular diseases are chloasma, chromophytosis, erythema simplex, lentigo, melasma, morphœa, nævus simplex and spilus, purpura, scleroderma, vitiligo, and xanthoma.

A *papule* is a circumscribed, solid elevation of the skin. In size it varies from that of a pin-point to that of a split pea. It may be of different colors, but is usually some shade of red. It is soft or firm to the touch. In form it may be acuminated, rounded, flattened, or umbilicated. Its base may be round, oval, or angular. It may be due to inflammation, as in eczema; to hypertrophy of normal structures, as in verruca; to the heaping up of epidermic cells about a hair follicle, as in keratosis pilaris; or to the retention of sebaceous matter in a follicle, as in comedo and milium.

The papule may remain as such throughout its course, and finally be absorbed; or it may change into a vesicle or pustule; or it may soften and break down.

Papular diseases have received the name of lichenoid diseases, and at one time we had a goodly number of lichens. Most of these have now been placed under other headings, as it is recognized that they are but single manifestations of other diseases. Papular diseases are apt to be scaly and itchy.

The principal papular diseases are: lichen tropicus, lichen ruber acuminatus and planus, lichen scrofulosorum, lichen pilaris or keratosis pilaris, lichen urticatus or papular urticaria, acne, comedo, milium, prurigo, and psoriasis. Like the macule, the papule is found in many diseases that can not be classed as papular.

A *tubercle* or nodule may be thought of as a large papule. Like it, it is a circumscribed solid elevation of the skin, usually of a reddish color. Indeed, the difference between a papule and a tubercle is mainly arbitrary and for convenience. Thus, we speak of a solid lesion up to the size of a split pea as a papule, while above that it is spoken of as a tubercle. Some lesions which are usually spoken of as tubercles, such as the tubercular syphilide, may not be larger than a split pea. Quite commonly, when a lesion is larger than a cherry it is spoken of as a

node. Auspitz[1] makes the distinction between a papule and tubercle on more scientific grounds, and regards a tubercle as a cell-infiltration into the corium. A tubercle is not only larger than a papule, but it extends deeper into the skin. In form and color a tubercle corresponds to a papule.

Tubercles may be absorbed and disappear and leave no trace; or they may break down and ulcerate and leave scars, as in syphilis; or they may remain unchanged for an indefinite period, as in molluscum.

The principal tubercular diseases are: carbuncle, epithelioma, keloid, lupus vulgaris, molluscum, rhinoscleroma, and xanthoma. Tubercles form a very prominent symptom in leprosy, syphilis, and erythema multiforme. Of course, tubercular used in this sense has nothing to do with the tubercle of tuberculosis.

A *vesicle* is a circumscribed elevation of the epidermis that contains fluid, generally serous. In size it varies from that of a pinhead to that of a split pea. Its color is crystalline when only serum is present, more or less opaque and yellowish when the serum is mixed with pus, and of a reddish hue when blood is effused into it. It may be pointed, rounded, flattened, or umbilicated. Vesicles are in most cases due to inflammation, as in eczema. They may be due to simple serous effusion, as in erythema; or to the retention of sweat, as in sudamina. They have around them, in many cases, a red halo. As a rule, vesicles are superficial elevations of the epidermis, and readily rupture and pour out their contents upon the skin, forming a yellowish crust. They may be below the mucous layer of the skin. They may remain as vesicles, and dry up, their contents being absorbed; or they may become changed into pustules.

The principal vesicular diseases are: dermatitis venenata, dysidrosis, eczema, herpes, hidrocystoma, impetigo contagiosa, sudamina, varicella, and zoster.

A *pustule* is a circumscribed elevation of the epidermis containing pus. In size and shape it corresponds to the vesicle. Its color is yellow and opaque; or brown or

[1] Ziemssen's Handbuch der Hautkrankheiten.

reddish if there is an admixture of blood with the pus. It either originates as a pustule or develops from a vesicle or papule. As a rule, pustules are inflammatory, and when they appear as a general eruption, as in syphilis, they indicate a strumous or broken-down condition. Around each pustule there is very commonly a well-marked inflammatory areola.

Pustules are prone to break down and discharge their contents upon the skin, forming a greenish crust. If located deep in the skin, they may leave scars.

The principal pustular diseases are acne vulgaris, ecthyma, furunculosis, impetigo, and sycosis. Eczema, syphilis, and a few other dermatoses are often markedly pustular in character. Pustular diseases are often spoken of as impetiginous.

A *bulla*, or bleb, may be considered as a large vesicle or pustule. It is of irregular oval shape or umbilicated. It may be as large as a split pea, or reach the size of a goose egg. It rises from the skin with a slight areola or with none at all. It is either fully distended or flaccid, and does not rupture readily. It may be a bulla from the beginning, as in pemphigus; or it may be formed by the coalescence of two or more vesicles; or it may arise on an erythematous lesion, as in erythema multiforme. Its contents are usually serous, but these may change in time to pus.

The only purely bullous disease is pemphigus; but bullæ are met with in dermatitis, dermatitis herpetiformis, erysipelas, erythema multiforme, impetigo contagiosa, leprosy, and syphilis.

A *wheal* is an evanescent round, oval, or elongated flat elevation of the skin, of a pinkish or white color, which is more or less firm to the touch. It is surrounded by a red halo. It may be as small as a pea or as large as the palm of the hand. Wheals appear suddenly and disappear within a few hours. They are due to a spasm of the capillaries of a limited area of the skin and an effusion of serum into the meshes of the skin, the raised part being the site of the effused fluid, and the halo the congested vessels in the neighborhood. The whiteness of the wheal is due to the

sudden effusion of the serum squeezing out the blood of the area. As the circulation becomes re-established the serum is absorbed, the whiteness changing to pink, and then to the normal color of the skin. The disease in which wheals are met with is urticaria. They can also be produced by contact with the stinging-nettle, or by sharp traumatism on skins predisposed to urticaria.

A *tumor* is a new growth in the skin which projects more or less above its surface and dips down into the subcutaneous tissue. It may be pedunculated. Tumors vary greatly in size. Their color is often that of the surrounding skin, but they may be red. They may become ulcerated. A tumor is rather a surgical than a dermatological lesion. Epithelioma, fibroma, and sarcoma are types of tumors.

SECONDARY LESIONS. The secondary lesions of the skin require a much less extended description. The main distinction to be retained in the student's mind is that between a crust and a scale. This can be readily done if it is remembered that a *crust* is formed by the drying of some secretion or exudation upon the skin: while a *scale* is a dry, laminated mass of epidermis which has separated from the tissues below, the product of imperfect or perverted nutrition. Thus, in vesicular eczema when the exudation dries on the skin we have a yellowish crust; while in squamous eczema we have thin scales, the horny layer of the skin not being perfectly produced. Crusts are yellow when formed of dried serum, green when derived from pus, and black when there has been an admixture of blood. Scales are whitish, grayish, yellowish, or dirty yellow.

Crusts are especially characteristic of ecthyma, some forms of eczema, favus, impetigo, and seborrhœa.

Scales are specially abundant in dermatitis exfoliativa, pityriasis simplex, pityriasis rubra pilaris, psoriasis, ichthyosis, and some of the lichens.

Excoriations are familiar as scratch-marks. They are superficial denudations of the skin. They are of value as a sign of itching, as scratching is their chief, though not sole, cause. They frequently are followed by pigmentation, if the irritation causing the scratching is long

continued. They also occur as the natural result of some diseases, such as pemphigus, without the intervention of scratching.

Fissures are cracks in the epidermis extending down to the corium. They are usually located in the folds of the skin, as over the joints. They occur in diseases attended by infiltration and thickening of the skin by which its elasticity is interfered with, and are especially seen in eczema, psoriasis, and syphilis. They often bleed, and sometimes are very painful.

Ulcers are irregularly shaped and sized losses of substance. They may be quite small or of very large size. They may be shallow, deep, excavated, or scooped out. Their edges may be undermined, as in tuberculosis; everted, as in epithelioma; or sharp-cut, "punched out," as in syphilis. Their secretion may be scanty or abundant. They result either from some previous lesion or from injury. They occur in carbuncle, chancre, chancroid, ecthyma, varicose eczema, epithelioma, furuncle, lupus vulgaris, sarcoma, syphilis, tuberculosis, and sometimes after zoster, dermatitis, and some pustular eruptions. They always heal with a cicatrix, leaving a scar.

Cicatrices, or scars, represent an effort of Nature to heal a damage to the skin by means of connective tissue. They occur only when the papillary layer of the skin or the parts beneath are destroyed. They may be depressed, as in smallpox; raised and puckered, as in lupus; smooth and white, as in syphilis. While ulceration usually precedes them, they occur independently of it, as in leprosy, scleroderma, and atrophoderma.

Other Elements of Diagnosis. Having mastered the lesions of the skin, we are now prepared to study the other elements of diagnosis. We must observe the location, distribution, and configuration of the eruption, and note its color, and whether or not it itches. When we have done all this, and have come to a probable conclusion as to the disease before us, then is the proper time to ask the patient a few questions as to his sensations and the duration of the attack. In a few cases of doubtful diagnosis the microscope will aid us.

Location. Upon the *face* we meet with acne, comedo, chloasma, erythematous eczema, epithelioma, herpes febrilis, lupus vulgaris and erythematosus, milium, rosacea, sycosis, and xanthoma.

An eruption confined to the middle third of the face, from above downward—forehead, nose, and chin—is in all probability rosacea.

An eruption occupying the bearded portion of the face, above a line drawn from the angle of the mouth to the angle of the jaw, is probably sycosis. Should it occupy the bearded portion of the face below that line it is probably trichophytosis barbæ.

If a scaly patch is found in front of the ear, it should put us on the lookout for psoriasis, which will often be found elsewhere on the body. This point may be useful in the diagnosis of a doubtful case. If a raw, or cracked, or scaly place is found behind the ear, it points to eczema.

Upon the *scalp* we meet with alopecia, alopecia areata, eczema, favus, pediculosis capillitii, seborrhœa, and trichophytosis.

If we find a patch of pustular eczema upon the back of the head and about the nape of the neck, the case is probably one of pediculosis; and if we look for the nits, we shall find them either at the site of the eruption or over the parietal region.

The *chest* is the favorite location for chromophytosis and keloid.

Upon the *back* we meet with acne, carbuncle, and the scratch-marks due to the irritation from pediculi. If we find long, parallel scratch-marks over the shoulder-blades, they are quite good evidence of pediculi in the clothing.

The extensor surfaces of the *forearms* and *wrists* are the favorite sites of erythema multiforme, while the flexor surfaces give lodgement to lichen planus and scabies. The posterior surface of the elbow is a common location for psoriasis, while on the soft skin of the bend of the elbow we find eczema.

Upon the *legs* ecthyma, elephantiasis, erythema exudativum, purpura, and ulcers are apt to occur.

A *general* eruption is either one of the exanthematous fevers, dermatitis exfoliativa, eczema, erythema, ichthyosis, lichen planus, lichen ruber acuminatus, pityriasis rubra pilaris, psoriasis, scabies, or syphilis.

Of these, syphilis is most marked on the sides of the chest and abdomen, and upon the face along the margin of the hair. It may also be given as a general rule, to which there are many exceptions, that syphilis occupies the flexor surfaces of the extremities and the anterior plane of the trunk, while psoriasis is found most markedly upon the extensor surfaces of the extremities and the posterior plane of the trunk.

CONFIGURATION. Certain diseases assume certain configurations, which, if noted, will sometimes assist in diagnosis. Thus we have

The circular outline and scalloped border of syphilis.

The round and bald patch of trichophytosis and alopecia areata.

The map-like border of psoriasis.

The oval or egg-shaped lesions of erythema nodosum and the gumma of syphilis.

The angular umbilicated papules of lichen planus.

The annular arrangement in herpes iris and pityriasis rosea, and in some cases of ringworm, psoriasis, syphilis, and seborrhœa corporis.

The patches of grouped vesicles upon reddened bases located over the course of a cutaneous nerve in zoster.

THE DIFFERENTIAL DIAGNOSIS OF RINGED ERUPTIONS.[1] The eruptions that appear, either habitually or occasionally, in ring shape are trichophytosis corporis, syphilis, psoriasis, erythema multiforme, seborrhœa sicca, pityriasis maculata et circinata, and, rarely, favus of the body in its so-called herpetic stage. These eruptions often bear so strong a resemblance to one another that it is hard for even experts to make a positive diagnosis. It is, therefore, small wonder that the physician who has not had much experience in skin diseases should sometimes make an error in diagnosis. Happily, each one of them does have certain so well-defined features that a sure diagnosis can be made

[1] American Medico-Surgical Bulletin.

in the great majority of cases. It is my desire to indicate the points in differential diagnosis between them.

Trichophytosis, or ringworm, may be taken as the type of ringed eruptions. It must be clearly understood at the outset what is meant by an annular or ringed eruption. It is one that has a well-defined raised border surrounding a patch of skin that is normal or nearly so, or in which active disease has ceased. A circular patch, such as is seen in alopecia areata, is not a ringed eruption, as it does not present a well-defined raised border, and the whole patch is equally affected. In ringworm we have a well-defined, slightly raised border composed either of vesicles, rarely seen, or pustules, or papules that are slightly scaly, or of small crusts, the remnants of the vesicles or pustules. Inside of this ring the skin may show no change, or be slightly scaly, the scaliness diminishing toward the center. The eruption usually itches slightly. There may be only one patch, or several in different stages of development. If there is any doubt about the diagnosis, it will readily be cleared away by examining some of the scales under the microscope, when if it be trichophytosis the fungus will be found with ease.

This form of ringed eruption differs from *syphilis:* in itching; in having a narrow border made up of scales, vesicles, pustules, or crusts; in its scaly center; in being superficial, and in its microscopical characters. It differs from *psoriasis:* in its superficial character; in its border not being covered with silvery scales; in not being a general eruption; in its parasite, and in not being of a pinkish-red color. It differs from *erythema:* in not being a symmetrical eruption; in its narrow border; in its color, that can not be made to disappear under pressure, and in having a fungous growth as its cause. It lacks the greasy character of *seborrhœa sicca*, and differs from the latter also in the presence of the trichophyton fungus. It differs from *pityriasis rosea:* in not being a general eruption; in its center being slightly grayish, and not of the appearance of chamois leather, and in being parasitic.

Syphilis at times shows itself in rings. These have one striking negative character, and that is, that they do not

itch nor burn. All the other ringed eruptions either itch or burn to a greater or less degree. Syphilis has a well-marked, rather broad, slightly elevated border, which is infiltrated, raw-ham colored, and composed of either scaling papules or of nodules. The center of the ring may be normal, scaly, crusted, superficially or deeply cicatrized, reddened or pigmented. Sometimes the nodules of the border may break down and ulcerate. Occurring on the palms or soles, the border may be hardly, if at all, elevated, but simply red and scaly. This is due to the thickness of the epidermis in these regions. It is quite characteristic of the annular syphilide that it is often an incomplete ring, the border being broken at some point. The diagnosis will be aided by finding other evidences of syphilis, which usually are to be found. This form of ringed eruption differs from ringworm in the way already indicated. As it is quite possible for a syphilitic subject to have any of the other ringed eruptions, a history of the case will sometimes be unreliable, if depended on for diagnosis. It is, therefore, better to make the diagnosis solely on what we see. It is only in very doubtful cases that a history of the eruption is desirable to help us to decide aright, and then only after a careful weighing of the evidence. A ringed syphilide is most apt to be confounded with *psoriasis*, but it differs from it: in having a raw-ham, and not a pinkish-red, color; in not itching; in showing a red seam beyond the scales; in the scales being less silvery, smaller, and more abundant; in the border formed of individual lesions; in not being so generally distributed over the body, and in not occurring in the characteristic sites of psoriasis—that is, on the elbows and knees. If the case were psoriasis, there would surely be some characteristic patches to guide us. *Erythema multiforme* and syphilis are so unlike in every respect that it is hardly possible they could be confounded. *Seborrhœa corporis* is located on the chest and between the shoulder-blades, and there will be found at the same time seborrhœa on the scalp. These locations are not characteristic of syphilis. Moreover, syphilis lacks the greasy feel of seborrhœa. The raw-ham color of the syphilide is never seen in seborrhœa. *Pityriasis rosea* is

readily distinguished from syphilis by the occurrence at the same time of both macules and rings, by its lighter color, and by the chamois-leather look of the contents of the rings. The infiltrated border of the syphilide distinguishes it from all the other ringed eruptions.

When *psoriasis* forms rings it does so by the clearing up of the centers of old patches, and there will be characteristic patches of psoriasis to guide us in diagnosis. The border of the ring is usually quite broad and slightly, if at all, thickened; its color is the pinkish red of psoriasis, and the scales that cover it are large and silvery. The center of the ring is composed of normal skin, which may be a little red. The scaling will be seen to be commensurate with the redness. The disease is commonly itchy.

The differential diagnosis from syphilis and ringworm has been given above. Like the syphilide, psoriasis bears no resemblance to *erythema* except in its ring shape. From *seborrhœa* it differs in not being greasy and in its silvery scales. At times the two diseases do bear a close resemblance to each other, but even then it will usually be easy to find some typical lesions of one or the other disease to decide the matter. There is little likelihood of confounding psoriasis with *pityriasis rosea*, as the former is much less superficial than the latter, and its scales are large and silvery, and not small and adherent; besides, it lacks the chamois-leather color which is a marked feature of pityriasis rosea.

Erythema multiforme, or erythema exudativum, not infrequently forms rings by the absorption of the centers of large tubercular lesions or patches. It is easy to recognize the lesion, as there will be other and characteristic erythematous lesions to guide us. The border of the ring is raised and its color is red, the redness, as in all erythematous lesions, being readily made to disappear on pressure, to return promptly when the pressure is removed. When the lesion has lasted for some time the color becomes darker and cannot so readily be made to disappear, because now the coloring-matter of the blood remains behind in the tissues. The center of the ring is red or

discolored on account of the partially absorbed exudate. Another form of ringed erythema is what is known as erythema, or herpes, iris, in which we have either a purplish spot surrounded by a raised whitish ring containing fluid, and outside of this a red areola; or a vesicle in the center with a purplish zone about it, a raised whitish ring containing fluid, and a red areola outside of all; or a central bulla with one or two rings of vesicles about it. This form of erythema is usually symmetrical, and occurs upon the extensor surfaces of the arms and legs and upon the backs of the hands and feet. It may occur as part of a general erythema multiforme or by itself. The ringed erythema is so peculiar in its features as to offer little difficulty in differential diagnosis, and need not detain us further.

Seborrhœa sicca, or *seborrhœal eczema*, as it is now called, is the lichen annulatus of Wilson and the seborrhœa corporis of Duhring. It forms ring-shaped lesions on both the scalp and trunk. These are best and most often seen on the trunk, but may also be found on the limbs. Their favorite sites are the chest and the back between the shoulder-blades. The rings are of large and small size, and at the same time there will be found fatty plates with more or less redness, the usual lesions of seborrhœa sicca. The border of the ring may be broad or narrow. If the former, then it will be formed of greasy crusts upon a reddened base; if the latter, the border will be seen to be made up of a number of red points, the open mouths of the follicles of the skin; or the border may be narrow and yet made up of fatty crusts. The skin in the neighborhood is commonly greasy, and the enclosed area of skin will look as if varnished, being glazed and yellow.

The differential diagnosis from ringworm, syphilis, and psoriasis has been given already. The greatest difficulty is often found in the diagnosis from *pityriasis rosea*, especially when the ringed lesions are on the legs. The resemblance is then so great that it has led some to question if seborrhœa and pityriasis are not identical. As a rule, the seborrhœal lesion is more fatty and yellow, while

that of pityriasis is more scaly, and the contained skin is more wrinkled and chamois-leather-looking. In typical cases there will be no difficulty in the diagnosis if the characteristics of both diseases are borne in mind. The presence of a seborrhœa on the scalp is corroborative evidence of the seborrhœal nature of a doubtful eruption.

Pityriasis rosea, or pityriasis maculata et circinata, not only shows rings, but also, as its name indicates, macules, and both forms of lesions are always present at the same time. It can easily be seen that the primary lesion is a pale-red papule, increasing in size, to become later a rosy-red lesion, which, after attaining a certain size, clears up in the center, so as to form a ring with a pale-red border and a yellow, old-parchment, or chamois-leather-like center. Both the borders and inclosed areas are slightly scaly. It is usually most pronounced on the chest and shoulders, but it may be a general eruption, though the hands, feet, and face are rarely affected. Its differential diagnosis has been given under the previously described diseases.

It is a property of all these eruptions that, if two or more of their rings appear near each other, they are very apt to run together and form figure-of-eight or gyrate lesions from the disappearance of the borders at the part where contact has taken place.

The ring-shaped or herpetic form of *favus* is not commonly seen. It occurs in favus of the body. It will then bear so strong a resemblance to ringworm that at first it is impossible to distinguish which it is; but it is only necessary to wait a short time, when a well-marked favic cup will develop.

Lichen planus papules, when they have crowded together into a patch, will form rings at times by the absorption of the central papules. The ring is rarely of large size; its color is the peculiar violaceous color of lichen planus; the center is depressed and the whole is scaly. As these rings are never seen apart from the simultaneous occurrence of characteristic flat, angular, smooth papules, with central

there is no possibility of confusing them with other ringed eruptions.

We occasionally see rings in lupus erythematosus and in epithelioma, but such occurrences are exceptional. When they do occur the other signs of the one or the other disease will be so much in evidence that there will be little danger of mistake in diagnosis.

Lupus erythematosus has a peculiar red color; its border is usually covered with closely adherent scales, and the ring will have a cicatricial center. At the same time there will be other patches present of typical lupus erythematosus.

Epithelioma, even when it does form a ring, has that characteristic hard, raised, waxy border which we see in all epitheliomas of the skin, and that will be enough for diagnosis.

COLOR. An eye for color is of some value in diagnosis. It is very difficult to convey by words a correct idea of the color of an eruption, but perhaps this list may prove helpful:

Raw ham of syphilis.
Brilliant red of erysipelas.
Inflammatory red of eczema.
Dark red of purpura.
Bright red of psoriasis.
Brown of pigmentary diseases.
Sulphur yellow of favus.
Buff of xanthoma.
Violaceous or dull red of lichen planus and lupus erythematosus.
White of leucoderma.

HISTORY. Having carefully noted all these objective symptoms, we have, by this time, pretty well made up our minds as to the diagnosis of the case. Now is the time to obtain the history of the case, either for the purpose of scientific study of its etiology and natural course, or for the purpose of clearing up some doubt as to the diagnosis. It is so easy to obtain a history of syphilis that were we influenced by the history we would be often misled. There is no reason why a patient with syphilis should not have any other skin disease. Moreover, most people do not pay much attention to the course of their diseases, and it would

be difficult for them to give a correct account of them if they would. Of course, a clear history of the initial lesion of syphilis, or its presence, would clear up any doubt as to an erythematous rash. The history of a scaly disease recurring at frequent intervals upon the elbows and knees would go far to determine the existence of psoriasis. In urticaria we often have to rely upon the statement of the patient or attendant as to the appearance of the wheals, as their presence at some time is pathognomonic, and they are usually absent when we see the patient. In these and similar ways the history is useful, but it should be entirely subordinated to the study of the objective symptoms.

Pruritus. It is important to know whether a disease itches or not. This we can discover by the presence or absence of scratched papules or scratch-marks. The itching eruptions are dermatitis herpetiformis, eczema, pediculosis, prurigo, pruritus cutaneus, scabies, and urticaria. The symptom is also present in the lichens, psoriasis, seborrhœa, and trichophytosis. It is markedly absent in syphilis, though an occasional case of syphilis will be encountered in which there is itching.

Burning. The sensation of burning is one the existence of which we must take upon the patient's statement. It is a prominent symptom in erythema. Very often a patient will say that his eruption itches, but if you watch him he will soon begin to rub his skin gently with the heel of his hand. This indicates that the sensation is one of burning and not of itching. In itching, the nails are used, or else the rubbing is vigorous.

Pain. Another symptom for the establishment of which we have to rely upon the patient is that of pain. The vast majority of skin diseases, while they may cause more or less discomfort, are not painful; but sharp neuralgic pain is a prominent symptom in epithelioma and zoster. The presence of pain of a shooting character will be e point in the differential diagnosis between lupus and ithelioma, and in favor of the latter. We also meet ith pain in neuroma, dermatalgia, and in some forms of

MICROSCOPE. The principal use of the microscope in the hands of the general practitioner is, as far as dermatological diagnosis is concerned, the determination of the presence or absence of fungi in hair and scales in a doubtful case of ringworm, favus, chromophytosis, or other parasitic disease. Happily, as between favus and ringworm we seldom have need of the microscope for diagnosis, their symptoms being so pronouncedly different. In the hands of the skilled pathologist and bacteriologist the microscope is constantly adding to our knowledge of diseases of the skin and is of great value.

A few words must be said about the *methods of examination* of patients. They should be always examined by daylight or by electric light. It is prudent to refuse to give an opinion of a case when seen in a poor light or by artificial light. If the patient is a man, it is necessary to request him to strip from top to toe, if there is the slightest need of seeing more than the ordinarily exposed parts. In the case of a woman such an inspection can seldom be made. The same end can be attained by exposing one part after another. In all cases we are justified in refusing to treat a case that we have not been given ample opportunity to examine.

All examinations of patients should be made in a warm room. The contact of cold with the usually covered skin is apt to give it a mottled look that obscures the diagnosis. It is well never to give a diagnosis of an obscure case that is under local or constitutional treatment until all treatment has been suspended for a few days and the disease allowed to assume its natural appearance.

Under the name of *diaskop* Unna has recommended the use of a small piece of thick, clear glass, marked with a measuring-scale, for the purpose of exercising pressure upon the skin under examination. This does away with the confusing redness, brings into greater prominence anatomical lesions, and enables us to take accurate measurements of them.

Every patient should be regarded as possibly out of health in some way quite apart from his skin trouble, and examined as to the performance of all his bodily functions

quite as carefully as if he had come to us only for the treatment of some internal disorder.

Therapeutic Notes.

In the second part of this book will be found the treatment suitable to the various diseases. In this place my object is to give the reader a few notes upon some of the newer and comparatively unknown remedies for skin diseases.

Liquor gutta perchæ (traumaticin) and flexible *collodion* are not new remedies, but are not as well known as they should be. Their advantages are that they are not greasy, prevent the clothing from being soiled, give us a fixed dressing, and exert a certain amount of pressure upon the skin that is useful in some cases. They are most used in the treatment of psoriasis, ringworm, and in circumscribed chronic diseases. Drugs suspended in them are not as active as when exhibited in ointments. In acute diseases, and specially where there is more or less exudation, they can not be used.

Plaster-muslins were devised by Unna. They are made by spreading upon muslin a mixture of gutta percha and oleate of alum. With the plaster mass many drugs may be combined. *Salve-muslins* we owe also to Unna. They consist of a salve mass composed of benzoated mutton tallow and wax, with which various drugs are combined. The muslin is dipped into the melted mass, then dried and rolled flat and smooth, either on one or both sides. Machinery is used for the purpose.

Pastes answer admirably for the acute and exudative conditions, as they protect the part and at the same time allow the exudate to work up through them, and thus escape. Lassar's paste, composed of zinc oxide, starch, and vaseline, as set forth in the formulary at the end of this book, was one of the first of these, and is still probably more used than any of them. Various other pastes have been proposed. It is found that infusorial earth (Kieselguhr) added to any ointment in the proportion of 10 per cent. will form a good paste.

Salve pencils and *paste pencils* we owe to Unna. The former are composed of wax and olive oil moulded into sticks about the size of the little finger. The latter are made of starch, tragacanth, or gum arabic, with which the drug is incorporated into sticks about the size of a slate pencil. Neither form of pencil has come into general use.

Gelatin preparations, one of which is given in the formulary, were introduced as preferable to ointments, and many German and English authorities speak well of them. They are troublesome to apply because they have to be heated before being used. They have not become popular in this country. The best one, in my experience, is that devised by Unna, made of oxide of zinc, 30.; gelatin, 30.; glycerin, 39.; and water, 10. This when cold forms a solid mass like white rubber. It is best used by heating it in a double saucepan like that used for cooking oatmeal. When warm it is to be spread on with a wide painter's brush. Immediately over the layer thus formed place a layer of absorbent cotton and then a roller bandage. It is excellent in subacute and chronic eczema.

Under the name of *skin splints* Unna and Engman[1] have introduced a method of applying dressings in skin diseases that is certainly ingenious. Pressure is often wanted. It should be even. It is also desirable that such dressings should be durable, not readily dislodged, and easily removed and replaced. For this purpose the part to be dressed is first covered with a layer of plaster- or salve-muslin, or simple bandage-muslin. This is painted over with a preparation composed of gelatin and glycerin, of each 15 parts; water, 40 parts; and oxide of zinc, 30 parts. When this is set it is painted over with a 10 per cent. solution of chromic acid, the green color of which may be masked by applying a varnish of zinc oxide and shellac. If a hairy part is to be dressed, and it cannot be shaved, the hairs should be greased. To remove the dressings it is only necessary to raise the edge and to touch the under side of the plaster with absorbent cotton wet with benzine. Variously medicated salve- or plaster-

[1] Monatshefte f. prakt. Dermat., 1893, xvii., p. 481.

muslins are to be used according to the nature of the case.

George H. Fox[1] has brought out a series of *elastic webbing*, broad rings of various sizes, that are admirable for retaining dressings in place. They serve the purpose of Unna's skin splints without any trouble either to the patient or physician.

In 1891 two excellent excipients were brought to our notice: one that is made from gum tragacanth, and called *bassorin;* and one that is made from Irish moss, and called *plasment.* They both sink well into the skin, leaving a protective film on it that can be readily removed with water. A more recent excipient of this class is called *gelanthum.* It is composed of gelatin and tragacanth.

Medicated *soaps*, specially those containing an excess of fat, have been brought out in great variety during the past years, and possess certain virtues, though as a rule a soap is not the best vehicle for medication. They are cleanly, can be readily removed from the skin with water, and can be made to produce a greater or less effect according to whether the lather is allowed to remain or not.

Under the name of *oleum physeteris* or *chœnoceti*, a species of whale oil was recommended by Guldberg[2] as an excellent excipient. *Althal*[3] is also derived from whale oil, in this case the Walrat whale. It is said to be odorless and perfectly bland. It occurs as mother-of-pearl white crystals, which subjected to heat form a fatty-feeling mass. *Oleic acid* is another vehicle that possesses the virtue of penetrating the skin. *Lanolin* and *agnine*, derived from wool fat, are among the newer greasy applications that are supposed to penetrate the skin. Both possess a peculiar odor, unpleasant to many. This is most marked in lanolin. It can be masked by combining with other ointments and by perfumes, such as rose water. *Adeps lanæ* is another of the newer bases for ointments. It is said to be unirritating, and to be capable of taking up 300 per cent. of water without losing its salve-like

[1] New York Med. Journ., 1895, lxii., p. 594.
[2] Monatshefte f. prakt. Dermat., 1890, x., 437.
[3] Dermat. Zeitschrift, 1899, vi., 158.

consistence. *Œsypus*, a refuse-product obtained in cleansing sheep wool, belongs to the same class of remedies. It is a disagreeable-looking stuff with a bad odor, and will not come into favor in this country. The property of penetration is not a virtue in all cases by any means, as in very many of our cases we wish to provide merely protection.

Resorbin is a mixture of almond oil, wax, water, and a small amount of a solution of gelatin. It combines readily with fats. It is commended for its penetrating powers, and is said to cool the skin and allay itching and inflammation. It is used alone and as an excipient in many diseases of the skin.

Myronin is a yellow, slightly aromatic, butter-like substance, for which penetrating powers are claimed. It is said to be a good excipient for mercury when used for inunctions and for zinc oxide in intertrigo and dry eczemas.

Vasogen is an oxidized vaseline which occurs both as a solid and a fluid, and is used as an excipient for various drugs.

In the way of drugs of comparatively recent date we have:

Airol, a combination of bismuth, iodine, and gallic acid, of gray-green color, odorless and tasteless, which is supposed to have the virtues of iodoform, though not so strong. It can be used as a dusting powder or as an ointment with vaseline.

Alumnol is a fine white powder, non-hygroscopic, and stable. It is soluble in water to the extent of 45 per cent., forming a permanent solution. Used as a powder (12 to 25 per cent.), ointment (1 to 12 per cent.), or in collodion (5 to 10 per cent.), it is recommended in acute and chronic eczema, various dermatitides, trichophytosis, chromophytosis, and contagious impetigo.

Anthrarobin was proposed as a substitute for chrysarobin, but it is a weak preparation and has not proved of special use.

Aristol is a good dressing for ulcers used in the form of a powder. It is expensive, but a good substitute for iodoform in some cases, as it is devoid of odor. In 10 per

cent. strength it has been commended in the treatment of psoriasis, erysipelas, hyperidrosis, eczema, acne, rosacea, and all sorts of ulcers.

Creolin, in 1 to 5 per cent. solutions in water, is often useful in erysipelas, dermatitis, and as an antiseptic. It is very irritating to some skins.

Dermatol, a subgallate of bismuth, is said not to cake and not to be poisonous. It is used as a powder for recent wounds, forming a crust under which healing takes place. For excoriations, intertrigo, and slightly moist eczema it is to be mixed with equal parts of starch. For large, irritable ulcers it may be used as an ointment of 10 per cent. strength or as a powder.

Eigon is a combination of iodine and albumen. It occurs as a light-brown, tasteless, insoluble powder. It is used locally as a 20 per cent. powder or a 5 per cent. ointment in wounds and ulcers of all sorts.

Emol is a soft, impalpable powder of delicate pink hue. It is analogous to fullers' earth. It softens hard water when added to it, and with warm water forms a natural soap, leaving the skin feeling pliable and soft. It is said to be a good dusting powder and to possess remarkable power in separating and causing to fall horny patches of eczema and keratosis. For this purpose it is made into a paste with water, and, when applied, it is covered with oiled silk or rubber tissue.

Europhen. An amorphous powder of yellow color and aromatic odor, containing 28 parts of iodine in 100. It is insoluble in water and glycerin; readily soluble in ether, chloroform, collodion, and traumaticin. It is useful in venereal ulcers and mucous patches in pure powder or 2 to 5 per cent. ointment: also in tertiary syphilis as hypodermic injections in the vicinity of the lesion and in solution in oil.

Filmogen is a solution of nitrate of cellulose in acetone with enough oil to make it elastic. It is used as an excipient for salicylic acid, resorcin, iodoform, pyrogallol, bichloride of mercury, chrysarobin, tar, ichthyol, and carbolic acid. It holds in suspension sulphur and zinc.

Fuchsine, and other aniline dyes, in 1 per cent. solution

in water, are recommended as useful in ringworm, inoperative cancerous ulcers, erysipelas, and other local infectious diseases.

Gallacetophenone, made by the action of acetic acid upon pyrogallol, was brought out in 1891 as remarkably efficient in the treatment of psoriasis. It may be used in 5 to 10 per cent. strength in ointment or collodion, does not stain the clothing, and thus far has proved neither poisonous nor very efficacious.

Hydroxylamine is poisonous when absorbed. It was commended for psoriasis, but can not be used over large surfaces. It has been commended in lupus vulgaris and ringworm of the scalp and beard, a grain and a half of the hydrochloride being dissolved in an ounce and a half each of alcohol and glycerin. It has not gained popular favor.

Ichthalbin is a combination of ichthyol and albumen. It is tasteless and odorless and usually does not disturb digestion. It passes through the stomach unchanged, to be split up in the intestinal tract. Used internally in doses up to 60 grains a day in rosacea, eczema, urticaria, and pruritus.

Ichthyol, especially the ammonio-sulphate, is useful, according to its introducer, Unna, and many others, both for external and internal use in rosacea, acne, eczema, urticaria, erythema, herpes, dermatitis herpetiformis, seborrhœa, furunculosis, erysipelas, psoriasis, sycosis, lupus, and some other dermatoses. By the mouth it is best exhibited in capsules, from 3 to 15 drops being given during the day. Externally it is exhibited in solution in water or in paste-form, and in the strength of $2\frac{1}{2}$ to 10, 20, or 50 per cent. In a watery solution of 50 per cent. strength it is of the greatest value in the treatment of erysipelas.

Iodolen is a combination of albumen and iodine, containing 36 per cent. of the latter. It is a yellow, coarsely granular, tasteless and odorless, almost insoluble powder. It can be given by the mouth as a substitute for the iodides and in the same doses as potassium iodide. Externally it is said to be a good, unirritating antiseptic.

Liquor anthracis simplex and *compositus* are thin fluids prepared from coal tar, which are said to be non-poisonous and to be useful in chromophytosis, trichophytosis, and chronic eczema. The compound fluid contains sulphur, resorcin, and salicylic acid.

Naftalan is a dark-colored, empyreumatic, thick mass that comes from Armenia. It is exhibited in ointment in the strength of 2½ to 5 per cent. It seems to be useful in all diseases in which tar is indicated, but is more disagreeable to use.

Naphtol, or beta-naphtol, is another of the coal-tar derivatives, and is useful in seborrhœal dermatitis, scabies, and other diseases.

Nosophen is a yellowish, odorless, and tasteless powder used as a dusting powder in ulcers, balanitis, herpes progenitalis, and wounds.

Oxynaphthoic acid is recommended by Schwimmer for scabies and prurigo in 10 per cent. strength in ointment. His ointment for scabies is composed of 10 parts each of this acid, chalk, and green soap, to 80 or 100 parts of lard.

Resorcin is recommended for seborrhœa capitis, beginning at 2 per cent. strength and increasing up to 5 or 10 per cent. as the acute stage lessens; for psoriasis, 10 to 20 per cent.; eczema about the mouth, 2 per cent.; erysipelas; and as a plaster for keloid and malignant growths. Strong preparations, say 20 to 30 per cent., can be used in acne and rosacea for the purpose of producing a dermatitis, to be followed by peeling off of the old skin, and in 40 per cent. strength it is one of the best remedies for lupus erythematosus. It must be remembered that this drug in weak strength promotes cornification, while in strong solution it macerates the skin. Remedies of this class are called "reducing" agents, and to them belong sulphur.

Sapolan contains 2½ per cent. of a specially distilled naptha product, 1½ per cent. of lanolin, and 3 to 4 per cent. of soap. It is of dark-brown color, of ointment consistency, smells slightly of naptha, and is easily rubbed into the skin. It is said to be very efficacious in acute and

chronic eczema, pruritus senilis, impetigo contagiosa, ecthyma, and urticaria.

Stérésol is an antiseptic varnish composed of gum lac, benzoin, balsam of tolu dissolved in alcohol, and a small amount of carbolic acid or phenol. It is recommended especially because it adheres to the mucous membrane as well as the skin, and has been found useful in various ulcers and in chronic eczema.

Tar. Compound tincture of coal tar is commended by Duhring as a substitute for liquor carbonis detergens. It is made by digesting 1 part of coal tar with 6 parts of tincture of quillaja (1 to 4 in 95 per cent. alcohol). It is used diluted, 15 minims to the ounce of water.

Thilanin is lanolin acted on by sulphur and containing 3 per cent. of the latter. Recommended for acute and chronic eczema, and in lupus erythematosus.

Thiol, which is miscible with water, and is used in the strength of 20 per cent. in liquid or powder form, is said to be useful in seborrhœa, rosacea, acne, eczema, burns, pemphigus, dermatitis herpetiformis, impetigo, and zoster. It is a chemically prepared imitation of ichthyol. As it is free from the disagreeable odor of the latter drug, it is preferable to it in some cases.

Thiosavonale is a readily soluble sulphur soap.

Tumenol in solution with equal parts of ether, alcohol, and water, or glycerin, or in form of paste or ointment is useful in moist eczema, burns, sycosis, ulcers, and rhagades.

Xeroform is a smooth, fine, greenish-yellow, tasteless powder, smelling faintly of carbolic acid. It is antiseptic, and is said to be useful in moist eczema of the hands and about the anus.

Classification.

In the present state of our knowledge it is impossible to make a satisfactory classification of skin diseases. Many attempts have been made to do this, and are still being made. Nearly every systematic writer tries his hand at it, with more or less indifferent success. One of the most scholarly classifications is that by Prof. E. B. Bronson,[1]

[1] Journ. Cutan. and Gen.-Urin. Dis., 1887, v., 369.

which is founded on that of Auspitz. Hebra's classification modified is found in a great many text-books. The arrangement of this book does away with classification. The one here given follows that given by Crocker, and has proved itself, after a number of years of use, a practical one.

CLASSIFICATION AND NOMENCLATURE.

Class	I.	HYPER-EMIÆ.
"	II.	EXUDATIONES.
"	III.	HÆMORRHAGIÆ.
"	IV.	HYPERTROPHIÆ.
"	V.	ATROPHIÆ.
"	VI.	NEOPLASMATA.
"	VII.	NEUROSES.
"	VIII.	MORBI APPENDICIUM.
"	IX.	PARASITI.

Class I. HYPER-EMIÆ—CONGESTIONS.

	Most prominent primary lesion.
Erythema simplex.	Erythema.
" pernio.	"
" intertrigo.	"
" scarlatiniforme.	"
" fugax.	"
" roseola.	

Class II. EXUDATIONES—INFLAMMATIONS.

	Most prominent primary lesion.
Erythema exudativum multiforme.	
a. papulosum.	Erythema and papules.
b. tuberculosum.	" " tubercles.
c. circinatum.	" " vesicles.
d. bullosum.	" " bullæ.
e. nodosum.	" " nodes.
f. iris.	" " vesicles.
Pellagra.	"
Acrodynia.	"
Urticaria.	Wheals.
Eczema.	Multiform lesions.
a. erythematosum.	
b. papulosum.	
c. vesiculosum.	
d pustulosum.	
e. rubrum, *seu* madidans.	
f. squamosum.	
g. verrucosum.	
Dermatitis seborrhoica.	Redness and scaling.

	Most prominent primary lesion.
Dermatitis repens.	Epidermic denudation and fluid exudation.
Impetigo.	Vesicles and pustules.
Ecthyma.	Large vesicles and pustules.
Pompholyx.	Bullæ and vesicles.
Herpes.	Grouped vesicles.
a. facialis.	
b. progenitalis.	
Zoster	Grouped vesicles.
Pemphigus.	Bullæ.
a. vulgaris.	
b. foliaceus.	
Epidermolysis.	Bullæ.
Equinia.	Multiple lesions.
Hydroa, *seu* Dermatitis herpetiformis.	Grouped multiform lesions.
Impetigo herpetiformis.	Grouped pustules.
Dermatitis.	Multiform lesions.
a. calorica.	
b. traumatica.	
c. medicamentosa.	
d. venenata.	
Dermatitis epidemica.	Erythema and papules.
Psoriasis.	Scaly crusts on red base.
Pityriasis rubra, *seu* Dermatitis exfoliativa.	Diffuse redness with large scales.
Pityriasis rosea.	Oval, scaly, red patches, with yellowish center.
Lichen scrofulosorum.	Papules, grouped.
" pilaris.	" follicular.
" planus.	" flat, angular.
" ruber.	" acuminate, scaly.
Pityriasis rubra pilaris.	" " "
Prurigo.	" lenticular.
a. mitis.	
b. ferox.	
Furunculus.	Phlegmonous.
Carbunculus.	"
Abscess.	"
Pustula maligna.	"
Ulcus.	Loss of substance.
Erysipelas.	Erythema with brawny swelling.
Conglomerative pustular folliculitis.	Patches of aggregated pustules.
Dermatitis gangrænosa.	Gangrene.

Class III. HÆMORRHAGIÆ—HEMORRHAGES.

Purpura.	Blood extravasation.
a. simplex.	
b. hæmorrhagica.	
c. rheumatica.	
Scorbutus.	Blood extravasation.

Class IV. HYPERTROPHIÆ—HYPERTROPHIES.

	Parts affected.
Ichthyosis.	Epidermis and papillæ.
Keratosis pilaris.	Papules about hair follicles.
Acanthosis nigricans.	Epidermis and papillæ.
Verruca.	" " "
Porokeratosis.	" " "
Clavus.	" " "
Cornu cutaneum.	" " "
Callositas.	" " "
Tylosis.	Epidermis.
Scleroderma.	Corium.
Morphœa.	"
Sclerema neonatorum.	"
Œdema "	"
Elephantiasis.	Whole skin.
Acromegaly.	
Chloasma.	Pigment.
Lentigo.	"
Nævus pigmentosus.	"

Class V. ATROPHIÆ—ATROPHIES.

	Parts affected.
Albinismus.	Pigment, deficiency, disturbance.
Leucoderma.	" " "
Atrophia cutis propria.	Corium.
Atrophoderma senilis.	"
" striatum et maculatum.	"
Atrophoderma pigmentosum.	"
Ulcus perforans.	"
Ainhum.	"

Class VI. NEOPLASMATA—NEW GROWTHS.

Keratosis follicularis.	Crusted papules.
Molluscum	Degeneration.
Colloid Degeneration	
Xanthoma	
Lupus vulgaris	Infiltrating.
" erythematosus	
Scrofuloderma	
Tuberculosis	
" verrucosa cutis	
Syphiloderma	
a. erythematosum	
b. papulosum	
c. pustulosum	
d. tuberculosum	
e. gummatosum	

Lepra	Infiltrating.
a. anæsthetica	
b. maculosa	
c. tuberosa	
Rhinoscleroma	
Leucoplakia	
Keloid	Benign.
Fibroma	
Acrochordon	
Myoma	
Neuroma	
Nævus vasculosus	
Telangiectasis	
Angioma serpiginosum	
Angiokeratoma	
Rosacea	
Lymphangioma	
Dermatolysis	
Carcinoma	Malignant.
Paget's disease	
Epithelioma	
Sarcoma	
Mycosis fungoïdes	
Yaws	
Verruga Peruana	
Furunculus orientalis	
Phagedæna tropica	

CLASS VII. NEUROSES—SENSORY DISEASES.

Hyperæsthesia.
Dermatalgia.
Pruritus.
Anæsthesia.

CLASS VIII. MORBI APPENDICIUM—DISEASES OF THE APPENDAGES.

A. SWEAT GLANDS.	*Most prominent primary lesion.*
Hyperidrosis.	Excessive secretion.
Bromidrosis	Altered quality.
Chromidrosis	
Hæmatidrosis	
Uridrosis	
Anidrosis.	Deficient secretion.
Miliaria crystallina (sudamina).	Vesicles.
Miliaria papulosa.	Inflammation.
Hydrocystoma.	Vesicles.

	Most prominent primary lesion.
B. Sebaceous Glands.	
Seborrhœa.	Excessive secretion.
a. oleosa.	
b. sicca.	
Milium.	Retained secretion.
Comedones.	" "
Acne vulgaris.	Inflammation.
" indurata.	"
" varioliformis.	"
Sebaceous cyst.	Retained secretion.
Adenoma sebaceum.	Papules.
Asteatosis.	Deficient secretion.
C. Hair.	
Hypertrichosis.	Excessive growth.
Atrophia.	Defective growth.
Alopecia.	Baldness.
" areata.	" in patches.
Keratosis pilaris.	Retention.
Concretions.	Growths on the hair shaft.
Trichorrhexis nodosa.	Nodes on hair shaft.
Canities.	Loss of pigment.
Sycosis.	Inflammation.
Folliculitis decalvans.	Alopecia with inflammation.
Dermatitis papillaris capillitii.	Inflammation.
Nævus pilosus.	Excessive growth with pigmentation.
Plica Polonica.	Felting.
Trichiasis.	Misplacement of cilia.
Distichiasis.	" " "
D. Nails.	
Pterygium.	Overlapping of nail fold.
Onychia.	Inflammation.
Paronychia.	"
Atrophia.	Defective growth.
Onychogryphosis.	Overgrowth.
Leucopathia unguium.	White spots in nails.

Class IX. PARASITI—PARASITES.

A. Vegetable.	
Favus.	Parasite—*Achorion.*
Trichophytosis.	" —*Trichophyton.*
a. barbæ.	
b. capitis.	
c. corporis.	
d. cruris.	
e. unguium.	
Chromophytosis (tinea versicolor).	Parasite—*Microsporon.*
Erythrasma.	" —*Microsporon minutissimum.*
Mycetoma.	Tumors.
Actinomycosis.	"
Pinta.	Discolored macules.

B. ANIMAL.

Scabies.	Parasite—*Acarus.*
Pediculosis.	" —*Pediculus.*
a. capitis.	
b. corporis.	
c. pubis.	
Cysticercus cellulosæ cutis.	Parasite—*Tænia solium.*
Dracontiasis.	" —*Filaria medinensis.*

SOME DERMATOLOGICAL DONT'S.

Don't make your diagnosis from the history of a case, because if you do you will often be led astray. Make it from the eruption that you see, and then substantiate or destroy this by the history of the case, if you will.

Don't fail to think of the possibility of every case being either syphilis or eczema; and

Don't fail to master these two diseases as thoroughly as possible, because if you learn to recognize these two you will have gone a long way in diagnosis. If they can be excluded, then the field of possible "might be's" is considerably narrowed.

Don't make the diagnosis of syphilis on account of a syphilitic history, because you can often get a history of syphilis in a non-syphilitic case.

Don't expect much, if any, history of syphilis in a woman, because you very frequently will not get it. In women the early symptoms of the disease are often so slight that they are not observed by them.

Don't throw out the diagnosis of syphilis on account of an eruption itching, because some syphilides, especially the papular variety, do itch at times. The *not* itching of an eruption is better presumptive evidence of syphilis than is itching positive evidence against it.

Don't make the diagnosis of lichen planus from the presence of flat angular papules with depressed centers alone, because identical lesions will at times be met with in eczema, syphilis, and psoriasis.

Don't depend upon getting the bleeding-points springing out of the delicate pellicle after carefully scraping off the scales, for your diagnosis of psoriasis, because you can produce the same thing in other diseases. In fact,

Don't depend upon any one symptom, but make your diagnosis from the general make-up of the disease as a whole.

Don't forget that many diseases of the skin are dependent upon disturbances in the general health of the patient. Therefore,

Don't fail to inquire into the performance of the functions of the various organs of the patient, and to put him into as good a physical condition as possible.

Don't tell your patient that it is dangerous to cure his skin disease rapidly, because it is not. If you

Don't know how to treat the case, ask advice of someone who does.

Don't encourage the popular notion that there is danger of an eruption striking in, because it never does.

Don't give arsenic for every skin disease, and, especially,

Don't give it in acute eruptions. Its sphere is in the chronic scaly eruptions, such as chronic psoriasis.

Don't forget that most cases of pruritus are due to internal causes; and that in them external treatment is wasted; and

Don't forget the bedbug and the pediculus as possible causes of the trouble.

Don't forget that the greatest secret in the treatment of eczema, and many other skin diseases, is not what particular drug or formula is "good for" the disease, but a knowledge of the great principle that acute diseases need soothing remedies and subacute and chronic diseases need stimulation.

Don't expect to cure an inveterate eczema with thickened skin by means of a soothing ointment, such as that of the oxide of zinc, because you will only waste your time and the patient's money.

Don't use tar in an acute eczema, because it is a stimulant, and what we want at this time is to soothe the inflamed skin. It is appropriate in a subacute or chronic case.

Don't allow water to touch the skin in acute eczema, because it always irritates in such a case.

Don't use a thick ointment on the hairy scalp, because it makes a disagreeable mess of the hair, and will not be "popular" with your patient. Even lard is not a pleasant vehicle for such applications. Vaseline and the oils are more elegant excipients.

Don't order the hair to be cut from the head of a young or old woman in any disease of the scalp, because, except in the case of a peculiarly stupid or careless patient, it is never necessary, and it is always disagreeable to the woman.

Don't allow a patient with ringworm to go to school, because if you do you will be responsible for the spread of the disease.

Don't pronounce a ringworm case well and incapable of spreading the contagion until you are sure that it is well; and

Don't be sure about it until there are no more "stumps" on the scalp, and you can find no more of the fungus in the hair.

Don't use the name "barber's itch" for anything but trichophytosis barbæ, because it is well not to use terms loosely to cover several different diseases.

Don't use chrysarobin on the face or scalp, because it is very apt to cause a good deal of dermatitis with œdema and to stain the skin a deep mahogany-red.

Don't forget to caution a patient to whom you have given chrysarobin not to touch his face with his hands after applying the drug, because if you do you will have either a mad or a frightened patient in your office.

Don't pronounce a patient addicted to the excessive use of alcoholic beverages on account of his having rosacea, because there are lots of other things besides alcohol that will cause it.

Don't use the positive pole of the battery for the needle in destroying hair by electrolysis, because if you do you will leave more or less permanent marks in the skin.

Don't apply a sulphur preparation after using a mercurial upon the face, or *vice versa*, because if you do you will raise a fine crop of comedones.

Don't use a camel's hair brush for making applications

of corrosive sublimate, because if you do some of the salt will be left on the brush each time it is used, and you will soon have a stronger solution than you bargained for. Always use a little cotton on a wooden toothpick or a splinter of wood.

Don't allow a fine-toothed comb to be used on the scalp, because it scratches and irritates the scalp.

Don't encourage or advise the use of pomades on the healthy scalp, because they are prone to become rancid and inflame the scalp. They are also unnecessary if the hygiene of the scalp is properly looked after.

Don't forget that dandruff is the most frequent cause of premature baldness, because if you remember this you may be able to prevent the fall of some one's hair for some time. Therefore,

Don't fail to treat every case of dandruff.—*The Medical Record*, December 29, 1888.

PART II.

THE DISEASES OF THE SKIN AND THEIR TREATMENT.

Abscess.

SYMPTOMS. Abscesses are very frequently met with as complications of diseases of the skin, such as acne, eczema, scabies, pediculosis, and other acute dermatitides. As thus met with they are usually of small size, though at times, as upon the scalp of a strumous child, they may attain considerable dimensions. They form rounded swellings that are at first tense but soon become soft and fluctuating. When incised more or less thick pus escapes. Their most frequent locations are: upon the scalp with eczema; upon the face and back with acne; about the neck arising from broken-down glands; and upon the extremities with scabies and pediculosis. Apart from a slight amount of discomfort, they do not give rise to subjective symptoms as a rule, and are, indeed, trivial affections. Of course, this does not apply to abscesses as seen by the surgeon. They may open of themselves and discharge their contents upon the skin. More commonly they are very sluggish in their course, and must be evacuated by some surgical procedure.

DIAGNOSIS. An abscess differs from a *furuncle* by not being raised into a conical mass; not having a central core, and by being less firm to the touch. It differs from a *carbuncle* by an entire absence of marked constitutional disturbance, brawny infiltration, intense inflammation, and cribriform mode of opening. *Kerion* often resembles an abscess, but differs from it in its uneven surface and its firmness to the touch. *Syphilitic gummata* are sometimes mistaken for abscesses and opened. They may be recognized by their dark-red color, the absence of pain and

discomfort, and the history of their growth. They grow slowly, beginning below the skin. There is generally more than one present, and then they are grouped. The aspiration of the tumor will decide the question. From an abscess we obtain pus; from a gumma a little bloody fluid.

TREATMENT. The management of the small cutaneous abscesses that we meet with as dermatologists is simple. The cavity is to be opened, the pus allowed to escape, and the part dressed with carbolized vaseline if small, or antiseptically if larger. It is sometimes necessary to swab out the cavity with a solution of carbolic acid of 2 drachms to the ounce, to destroy the abscess wall and prevent the reformation of the abscess.

Acantholysis. A disease characterized by loosening or separation of the mucous layer of the epidermis. See Epidermolysis.

Acanthosis Nigricans. Under this name cases have been reported by Pollitzer, Janovsky, Crocker, and a few others. It occurs at any time of life, but most often between the thirtieth and fortieth year. It consists in a dirty-brown to bluish-gray or black discoloration of the skin and mucous membranes, with more or less papillary outgrowths and seborrhœal warts. On the places that are most discolored the papillary outgrowths are most marked. The skin is thickened to a greater or less degree, and is not scaly. The regions affected are the face, neck, mucous membranes of the mouth (especially the tongue), the backs of the hands (especially the fingers), the axillæ, groins, genito-anal regions, and abdomen. Women are more often affected than men. Late in the disease the hair and nails are lost. The cause of the disease is unknown. Rille[1] regards it as a form of keratosis. Darier, J. Burmeister,[2] and others say that it is often due to cancer of the abdominal sympathetic. The prognosis is bad, death resulting in from eight months to two years. In some cases the

[1] Wien. med. Wochenschr., 1897, xlvii., 1019.
[2] Arch. f. Dermat. u. Syph., 1899, xlvii., 343.

duration is much longer. Treatment thus far has been unavailing.

Acne. Synonyms: Varus, Ionthus; (Ger.) Finnen; (Fr.) Acné, Bouton; Stone-pock, Whelk, Pimple.

Acne is an inflammatory disease of the sebaceous glands and the hair follicles, characterized by an eruption of papules, pustules, or tubercles upon the face, neck, shoulders, or chest, which usually begins at puberty and tends to run a chronic course.

Different writers and teachers have applied different names to the various phases of acne. They had best be forgotten, except in so far as they are of historical value. The term acne is applied by the French school to all diseases of the sebaceous glands. It would seem to be the wiser plan to reserve the name for the disease as just defined. Regarded thus, we have but two varieties of acne, namely, *acne vulgaris* and *acne indurata*.

Acne Vulgaris, or Simplex, is either papular or pustular in character, though usually it is a combination of the two, together with more or less comedones and a certain amount of seborrhœa.

Symptoms. If only papules exist (*A. papulosa*), the face, shoulders, or chest will be found to be dotted more or less profusely with pinhead-sized, acuminated elevations of the skin, of a pinkish to red color, and with a central opening at the summit. Very often the central openings will be filled with blackish specks. The lesions are then spoken of as *A. punctata*. This term is used by some writers to designate the comedo, but improperly according to our definition. It is rare that acne exists only in the papular form. More usually it will be found that here and there the papules are surmounted by a pustule, or a pustule has taken the place of a papule. We now have *A. pustulosa*. In strumous subjects the pustular element preponderates over the papular, and the face may be greatly disfigured by the large number of lesions present upon it. The pustules are from pinhead to small-pea size and have an inflamed base. (Fig. 5.)

Together with the acne and the comedones we meet with

milia quite commonly, and the affected parts are usually greasy to the feel, showing that the sebaceous glands sympathize in the disease. We now have a fair picture of a typical case of acne vulgaris. The face, back, neck, or chest, or all four, are dotted over in an irregular manner with blackish points, papules, and small pustules; the skin

FIG. 5.

Acne vulgaris.
(From Prof. GEORGE H. FOX'S Service in the Vanderbilt Clinic.)

of the nose and forehead looks shiny and feels greasy, and perhaps there are some milia scattered about the region of the eyes. At times the eyes will appear inflamed and hyperæmic, especially in young, otherwise robust subjects. More commonly the complexion will have that pasty appearance indicative of what has from old times been called the strumous condition. If the inflammatory process has been unusually severe, we may find a considerable amount of

scarring. Usually acne vulgaris does not leave permanent scars. The profuseness of the eruption varies greatly. In some cases there will be but a few lesions, while in other cases they will be present in vast amount. This form of acne generally occurs in young people. The duration of the individual lesion is short, as it soon either dries up or discharges its contents. If the papules are squeezed, little plugs of sebaceous matter will be expressed. If the papulo-pustules are treated in the same way, there will first be pressed out a small sebaceous plug and then a drop or two of pus.

Acne Indurata is a pustular acne in which the pustules are of large size and seated upon deeply infiltrated bases. They are most commonly sparsely dispersed, and take the form of purplish "lumps" of pea to bean size which are hard to the touch. Sometimes they are more readily appreciated by touch than by sight, being located deeply in the skin. Sometimes they take the form of cutaneous abscesses, and if by chance several are located close to one another they may run together and form a raised, dark-red, doughy mass. When incised, these lesions sometimes give exit to a large amount of thick pus. They usually leave scars, which sometimes are very disfiguring unless they are opened very early in their course. It may be the only form of acne present, or it may be combined with acne vulgaris. This form of acne usually occurs at a more advanced age than does acne vulgaris, though it is not infrequently met with in early life. While occurring on the face, the neck and back are the regions in which it is prone to develop in the most marked manner. (Fig. 6.)

ETIOLOGY. Acne is one of the most common of skin diseases, and its great predisposing cause is youth. The disease first shows itself about the time of puberty and manifests a tendency to disappear when the body is fully developed—that is, from the twenty-third to the thirtieth year, though it may continue much later. A few rare cases have been reported of acne at an early age. Thus, Chambard[1] met with a case in a girl of six and a half

[1] Ann. de derm. et de syph., 1878–79, x., 259.

years. The indurated form of acne appears later than the simple form, usually after the twenty-fifth year. Both sexes are affected, but the disease is more frequent in females than in males, and in them begins at an earlier age. The period of youth is the time of great developmental activity in which the sebaceous glands take part, and it is probable that there is a too great activity of the glands and an improperly formed sebum is the result. Normally, the

FIG. 6.

Acne indurata of the back.

product of the fat-glands is an oily fat. In acne an inspissation of the fat takes place, forming a plug that acts as a foreign body and sets up an inflammation.

Individuals with thick, pasty, pale skins with patulous follicular mouths are predisposed to acne. These peculiarities of skin are met with in scrofulous subjects. The patulous follicular mouths give ready lodgement to foreign matters, and comedones are thus formed. This prevents the escape of the follicular contents, a plug is formed, and

we have an acne papule or pustule. Comedones are, therefore, an exciting cause of acne.

Heredity has been asserted by some to be a predisposing cause of acne, but the disease is so common that there is no certainty about this factor.

Digestive disturbances, while not causing acne, are most active in aggravating it. These may take the form of dyspepsia, stomachal or intestinal; or mal-assimilation; or failure on the part of the liver or pancreas to perform its physiological functions; or sluggishness of the large intestine and consequent constipation. Improper diet, so common in early life, is responsible for the maintenance of many cases of acne.

Next to disorders of the digestive organs, those of the sexual organs are supposed to have most influence in aggravating acne. But, inasmuch as most cases of acne are amenable to the influence of diet and regulation of digestive disorders without any attention being given to sexual disorders, it is probable that the latter are important etiological factors in comparatively few cases. Indeed, it is not improbable that the acne that appears on the faces of women at each menstrual period, and at that time alone, as well as the aggravation of an already existing acne, is due to the more or less pronounced disturbance of the digestive organs so frequently observed at the same time. In some cases acne does seem to be a reflex irritation from the uterus. Amenorrhœa is the uterine derangement most frequently encountered, but that condition is but one evidence of a general constitutional disorder rather than a disease in itself.

Masturbation and continence have each been blamed as excitants of acne. The former of these of itself does not cause acne, but its well-known effects on the nervous, moral, and physical condition of growing youths would sufficiently account for any part it may have in producing acne. There is absolutely no proof that continence causes acne. If a boy or young man keeps himself in a constant state of unrest by lascivious thoughts, that is not true continence, even though he does not masturbate nor copulate. It is safer for us to say that bad sexual hygiene may cause

acne, rather than to ascribe it either to masturbation on the one hand or to continence on the other.

It may be stated as a broad, general rule, that anything that lowers the general health of the patient contributes to the production of acne. We have space to enumerate only some of these exciting causes. Thus, we have the vague state "general debility," anæmia and chlorosis, oxaluria and uræmia, rheumatism and gout, poor circulation, mental and physical exhaustion, and chronic malaria. J. Schutz[1] believes that deficient heart action and consequent slowness of the circulation are the underlying causes of acne, as they lead to an alteration of the sebaceous secretion.

In 1881 Denslow[2] advanced a theory that a want of tone in the arrectores pilorum muscles, either alone or together with an over-production of sebaceous matter and its retention in the sebaceous glands, was an important etiological factor in acne. As the muscles failed to act with sufficient vigor, they did not perform one of their offices—the emptying of the follicles—and this allowed of the retention of glandular products and consequent acne.

Acne of the pustular variety is said to be due to the entrance of the staphylococcus aureus et albus into the follicles, which offer proper ground for their growth. Unna believes that there are several forms of micro-organisms found in the comedones, and that one, a small bacillus, is the cause of the disease. He regards the usually accepted systemic causes of acne as only aggravants of the disease, and teaches that the disease is a purely local one. His views have been largely accepted. T. C. Gilchrist[3] has demonstrated a special bacillus in pustular acne that he regards as the cause of the pustules. For it he proposes the name *bacillus acnes*. He wisely insists that a certain kind of skin is necessary for its growth and the production of its effects.

PATHOLOGY. Acne may begin in the hair follicles or

[1] Arch. f. Dermat. u. Syph., 1900, li., 323.
[2] New York Med. Journ., 1881, xxxiii., 189.
[3] Trans. Amer. Dermat. Assoc., 1899, p. 97.

in the sebaceous glands, and may be due either to their becoming clogged up by inspissated sebum and acting like a thorn in the flesh, or to their invasion by micro-organisms, either from without or within, which set up a suppurative perifolliculitis. The papules of acne are located in the upper part of the skin, while the pustules are deeper. In very bad cases the follicle may be entirely destroyed by the perifolliculitis and scars will be left. The sebaceous glands do not take a very active part in the process. Micro-organisms are found abundantly in the suppurating gland cavities.

In acne indurata we find the hair follicles enormously dilated, their orifices filled with corneous cells, and their cavities almost converted into cysts. The connective tissue about the follicles shows decided signs of inflammation and may be increased in amount. Very often the follicles are destroyed by the perifollicular inflammation. When the perifolliculitis is severe and extensive the deep layers of the skin become involved, and we have abscess formation.

Diagnosis. Acne is to be differentiated from rosacea, papular and pustular eczema, sycosis, the small pustular and tubercular syphiloderm, and variola.

Rosacea is due to a dilatation of the blood vessels, and is attended by hyperæmia and telangiectases. If there are any pustules, they are superficial, and if excised give exit to only a drop of pus. Acne is a disease of the sebaceous glands, and papules and pustules constitute the disease. They are often large, and if excised will give exit to a plug of sebaceous matter and thick pus. Rosacea, as a rule, occupies the middle third of the face alone, the forehead, nose, and chin. Acne is scattered over the whole face, and is often found on the shoulders.

Papular eczema may occur at any age; acne usually occurs between the ages of fifteen and twenty-five. Papular eczema rarely is seen on the face alone, and is prone to attack the trunk and extremities; acne often occurs on the face alone, and is never disseminated over the limbs and trunk. In eczema there is an absence of comedones; the papules are often surmounted by or change into vesicles;

they tend to form patches, and the disease is very itchy, so that scratch-marks are almost invariably found. When it gets well it leaves no trace on the skin. These symptoms are foreign to acne.

In *pustular eczema*, or what has been called impetigo simplex, we have a large number of small pustules running together to form patches which rapidly become covered with greenish or yellow crusts. The disease runs a far more acute and stormy course than does acne, and is itchy. It is very frequently met with in children, whom acne rarely affects.

Sycosis is a pustular disease affecting the hair follicles alone, each pustule being pierced by a hair. Acne occurs on the non-hairy as well as the hairy parts, and, indeed, shows preference for regions supplied only with rudimentary hairs.

The *small pustular syphiloderm*, or syphilitic acne, is a general eruption, and it is easy in most cases to obtain other evidences of syphilis, such as the remains of the initial lesion, enlarged lymphatic glands, mucous patches, or the like. It is usually more uniform in its lesions, and these are plainly papulo-pustular. The color of the areola is more that of raw ham and less inflammatory looking than is that of acne. The lesions sometimes show a tendency to group into segments of circles, and each lesion undergoes a definite development. They sometimes leave small, smooth, white scars that may disappear in a few months. The *tubercular syphiloderm* could be mistaken for an indurated acne. In it there will usually be found other evidences of syphilis. The lesions group themselves into patches that are kidney-shaped or form segments of circles. The tubercles are dark-red or raw-ham colored, surrounded by a well-marked areola, firm to the touch, and do not contain pus. They may ulcerate, or, being absorbed, leave pigmented and punched-out cicatrices, and, finally, smooth white scars. The scars left by acne indurata are puckered and more disfiguring.

Variola could scarcely give rise to much doubt, as it has well-marked constitutional symptoms, and its lesions undergo a definite and characteristic development.

TREATMENT. In the treatment of acne we can obtain a cure most surely by attention to the general condition of the patient; most rapidly by a combination of internal and local treatment.

We, therefore, begin the treatment of a case by a careful inquiry into the general condition of the patient, and endeavor to regulate any, even the slightest, derangement of the internal organs. By so doing we may find no one of those conditions enumerated under the etiology of the affection, and the patient may consider himself as in the best condition. Further observation will probably reveal some deviation, though slight, from perfect health. The relief of constitutional disorders is conducted according to the principles of general medicine, and cannot be given here. Many of the cases require cod-liver oil and iron as general measures quite apart from any evident disease. This is seen in the sluggish cases occurring in strumous subjects with pasty skins. In plethoric subjects with a good deal of inflammation attending the acne laxative agents, such as a tenth of a grain of calomel in tablet triturates, given three or four times a day, will aid in a cure, quite aside from any constipation.

Diet and hygiene are agents to be employed rather than drugs. It is impossible for us to lay down fixed principles of diet, and it is better to study each case by itself. The well-to-do are all prone to eat too much, and it is remarkable how rapidly their acne will improve by reducing their diet to the simplest elements. In many of them a milk diet for a few days, provided milk agrees with them, will accomplish a marked benefit. It must be remembered that milk is a food, and that when other foods are partaken of freely the taking of milk at the same time may overload the stomach. The cutting of milk from the dietary will be of great benefit in some cases of acne. It is a good rule to cut off from the dietary all pastry, cakes, candy, sweets, hot breads, pancakes, greasy soups, articles fried in fat, rich gravies—in fact, all those things that are most apt to tempt the palate. Oatmeal is often cited as a cause of acne, and had best be dropped. Hot water before meals, a glass of water at meals and two hours

after meals, are good directions for the use of things to drink. Tea, coffee, malt liquors, sweet and heavy wines are to be avoided. Butter may be used freely, and care must be had not to restrict the diet too greatly. Many young girls almost starve themselves in the mistaken idea that a low diet will give them a fine complexion.

Exercise must be insisted on, an hour or more a day being spent in walking, horseback or bicycle riding, rowing, or other out-door exercise. Daily bathing or dry rubbing will keep the skin in healthy condition, and Turkish baths are often beneficial. Where patients either can not or will not take a daily bath much good will be accomplished by having them bathe the chest and back daily with cold water and then dry the skin by brisk rubbing with a coarse towel.

Arsenic, sulphide of calcium, glycerin, and ergot are the drugs that are given by the mouth as curative in acne. *Arsenic* is the oldest and most honored of these. It is of use only in very chronic, sluggish cases, and the more papular the case the more useful the arsenic. It should be used as the last resort, not as the first. Fowler's solution is the most frequently used preparation, in doses of from three drops three times a day, as an initial dose, gradually increased to fifteen or twenty drops or until the appearance of some symptoms of poisoning. Piffard[1] recommends bromide of arsenic in the dose of $\frac{1}{100}$ to $\frac{1}{50}$ grain two or three times a day in rather acute cases of acne. A convenient method of administration is to make a one per cent. solution in alcohol, and give one or two minims of that in a wineglassful of water. Should it cause gastric irritation the dose must be lessened. I have used this in a number of cases with good results. The *sulphide of calcium* has its advocates for sluggish pustular cases. It should be given in small doses, from $\frac{1}{100}$ to $\frac{1}{10}$ grain, in gelatin-coated pills or fresh tablet triturates. One pill may be given four or five times a day until the tendency to pustulation is increased. It then should be discontinued until the exacerbation has subsided, when it should be again administered. It is of doubtful

[1] Journ. Cutan. and Ven. Dis., 1884, ii., 71.

value. *Glycerin* was advocated by Gubler[1] as a cure for acne, and is well spoken of by others. It must be given in doses of a teaspoonful three times a day increased to a tablespoonful, and is of most use in strumous cases. *Ergot*, either the fluid extract in doses of half a drachm three times a day or a corresponding amount of ergotin, has many advocates.

Chrysarobin, internally, has been recommended by Stocquart,[2] in the dose of one-sixth to one-half grain. Small doses of the *bichloride of mercury* are sometimes curative where there is much infiltration.

Iodide of potassium in doses of from one to five drops of a saturated solution, well diluted, taken three times a day before meals, sometimes is useful in pustular acne.

Sherwell[3] advocates the passage of the *cold sound* through the urethra of a young man suffering with acne. Hot vaginal douches are recommended by some in acne of women.

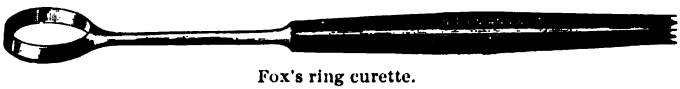
The objects of *local treatment* are to open up the pustules and papules and allow of the escape of their contents, to stimulate the skin to a more healthful action, and, according to the bacteriologists, to prevent further infection of the follicles by micro-organisms. To attain the first two objects we may employ either a quick or a slow method; to attain the last object we employ an antiparasitic. The best preventive local treatment is to keep the skin clean and its nutrition good by the use of soap and water. I have found great benefit from the use of a soap proposed by Unna, whose base is liquid paraffin, 30 parts, and dried-out pure soap, 70 parts, to which is added superoxide of soda, from 3 to 10 per cent.

An efficient local treatment for nearly all cases of acne is to put the skin somewhat on the stretch and scrape it somewhat roughly with a large and long, blunt dermal curette with a fenestrated blade (Fig. 7). This tears off all the tops of the lesions, presses out all the contents of the follicles, and stimulates the skin in a most vigorous manner.

[1] Journ. de Bruxelles, 1870.
[2] Ann. de derm. et de syph., 1884, v., 15.
[3] Journ. Cutan. and Ven. Dis., 1884, ii., 335.

It is followed by some bleeding, which it is well to encourage by the use of warm water. Deep pustules or cutaneous abscesses, if not emptied by the curetting, should be incised. All comedones should be squeezed out. The after-treatment

FIG. 7.



Fox's ring curette.

consists in washing the face with warm water and soap and dusting with cornstarch, to which may be added oxide of zinc. Instead of this a solution of peroxide of hydrogen may be dabbed on. The scraping is to be repeated two or three times a week. The procedure seems rough, but after the first scraping the patients do not mind it much, and the result is the attainment of a smooth skin in a comparatively short time. With this plan we may use a sulphur ointment, a drachm to the ounce, to be applied twenty-four hours after the scraping, or a wash of bichloride of mercury, half a grain to the ounce of dilute alcohol, to which may be added a little glycerin. Thus will we fulfil all three of the indications for treatment.

The same results can be attained in a slower way by opening every pustule with an acne lancet (Fig. 8) and squeezing out every comedo. This is to be done once or twice a week and a sulphur preparation used between times. Very timid patients who will allow no surgical interference may be treated according to the same principles by directing them to scrub their faces thoroughly

FIG. 8.

Fox's acne lance and dermal curette.

once a day with green soap, or tincture of green soap, and leave the lather on. After a day or two of good scrubbing an amount of dermatitis will be excited sufficient to cause the old skin to peel off, while the tops of many of the lesions will have been torn off and the skin will have been

decidedly stimulated. Not until the skin has become scaly and feels tense to the patient should a soothing ointment be applied. Repeated applications of the soap frictions will slowly bring about improvement. Rubbing the face with fine sand or coarse cornmeal will do good, but is not so elegant.

Massage to the skin will give nearly if not quite as good results as the rougher curettage. The tips of the fingers should be dipped in cold cream, and then, pressure being exerted by them, the skin of the forehead should be deeply stroked from the middle line out and over the temples. The nose should be stroked from the bridge outward and downward. The skin of the cheeks should be pinched up and rolled between the fingers and thumb. These movements facilitate the emptying of the follicles. The application of the galvanic current by means of the roller electrode, or by ordinary sponge electrodes, will in some sluggish cases prove helpful. G. W. Wende[1] recommends placing the electrodes in close proximity on the face and constantly changing their position until the skin becomes reddened. The amount of current to be used depends upon the ability of the patient to bear pain. Where the skin is very sensitive the anode can be held in one place and the face gently stroked with the cathode, using five to ten cells for fifteen minutes.

A vast number of prescriptions have been written which are "good for acne," the majority of which contain sulphur in some form, and in the strength of half a drachm to one drachm to the ounce, and in ointment or lotion form. Sulphur in powder form is good if the patient doesn't mind the odor. The ordinary sulphur ointment of the Pharmacopœia is as good a preparation as any. It may be made more elegant by adding some perfume. The sulphuret of potassium may be used in the following:

℞ Potass. sulphuret., Zinci sulphat., Aquæ rosæ, } āā ʒj; āā 3,5 ʒiv; 100, M.

This preparation is commonly spoken of as "Lotio alba,"

[1] Buffalo Med. Journ., 1898-99, xxxviii., 254.

and is one of the most useful of the compounds of sulphur. It is to be applied every day after being well shaken.

Vleminckx's solution is an active preparation in causing the old skin to exfoliate. It is composed of—

℞	Calcis,	℥ss;	15	
	Sulph. sublim.,	℥j;	30	
	Aquæ destil.,	℥x;	300	M.

Cook to ℥vj (192.) and filter.

After this has been left on a few hours it should be washed off and a soothing ointment, such as ungt. zinci oxid. or ungt. aquæ rosæ, applied. It is most useful in acne of the back.

The best sulphur ointment, according to my experience, is one proposed by Unna, as follows:

℞	Adepis lanæ,	ʒijss;	10	
	Ac. acetici dil.,	ʒij gr. xlv;	11	
	Adepis benzoat.,	ʒijss;	10	
	Sulph. præcipitat.,	gr. xlv;	3	M.

This is to be applied at night, and, when practicable, in the morning.

Mercurial preparations may be used to more advantage in some cases than those of sulphur. It should be borne in mind that a mercurial must never be applied to the skin until all traces of sulphur are removed, or *vice versa*, because if the precaution is forgotten the black sulphide of mercury will be formed, which will give the skin the appearance of being sown with powder grains. A lotion of corrosive sublimate, 1:2000 to 1:1000, may be mopped on once or twice a day, or an ointment of the protiodide, as recommended by Duhring, may be used:

℞	Hydrarg. protiodid.,	gr. v-xv;	1	
	Hydrarg. ammon.,	gr. x-xxx;	2	
	Ungt. simplicis,	ʒj;	30	M.

Lassar[1] recommends the following paste:

℞	β-naphtol,	10 parts.	
	Sulph. præcip.,	50 "	
	Vaseline, Sapo viridis,	āā 25 "	M.

[1] Therap. Monatshefte, 1887, No. 1.

This is to be spread upon the skin to the thickness of the back of a knife-blade, and left on for fifteen or twenty minutes. It is then to be wiped off with a soft cloth, and the skin powdered with talc. The skin becomes inflamed, turns brown, and peels off. The application is to be repeated every day until the skin does peel off. Desquamation can be hastened by the application of Lassar's paste with two per cent. of salicylic acid.

Resorcin has been commended, used in twenty per cent. strength. Ichthyol, the ammonio-sulphate, is recommended by Unna for acne, either as a three to five per cent. ointment or as a three to ten per cent. aqueous solution. As much as fifteen grains of it are to be taken by the mouth during the day. A mild corrosive sublimate wash is to be applied to the face until the patient goes to bed, and then a ten per cent. aqueous solution, or paste of ichthyol, is to be kept on till morning. Startin[1] has employed local steam baths by means of a steam atomizer, with success. The steaming should be kept up for twenty or thirty minutes, and tincture of benzoin used in the medicine cup. While useful in some cases it does harm in other cases.

The foregoing remedies are all specially adapted to more or less sluggish cases, the type met with in the great majority of instances. In very recent and quite inflammatory cases, besides the administration of laxatives and the regulation of the diet, the patient should be directed to bathe the face with hot water, either with or without the addition of borax (ʒij to Oj), and apply a soothing ointment. When the inflammatory symptoms subside recourse must be had to some of the above detailed methods of treatment.

Bathing of the face with hot water before the application of any lotion or ointment should be advised. In indurated acne, where cutaneous abscesses have formed and the lesions are discrete, each abscess will have to be opened up with a lancet, the contents of the abscess discharged, and carbolic acid, either pure or diluted, introduced, by means of a little cotton around the end of a bit

[1] Lancet, 1889, i., 934.

of wood, into the abscess cavity, so as to destroy the lining membrane.

Individual acne lesions can sometimes be aborted by touching them with pure carbolic acid or acid nitrate of mercury.

PROGNOSIS. By persistent effort and careful regulation of all the bodily functions a great improvement can be effected, one fairly deserving the name of cure. But it is often hard to prevent the occasional appearance of a few acne lesions until the period of life in which acne usually occurs is passed. There are some cases in which we can do but little, because we are unable to remove the underlying cause.

Acne, Adenoid. See Lupus miliaris.

Acne Albida. See Milium.

Acne Artificialis. By this term is meant an inflammation of the sebaceous glands and hair follicles caused by drugs either applied locally or acting from within. It has three principal varieties, namely, *tar acne*, *bromic acne*, and *iodic acne*, and should be regarded rather as a dermatitis medicamentosa than as an acne. Tar produces acne-like lesions with black points when applied locally to some susceptible skins. As a rule, papules are more abundant than pustules, but abscesses and furuncles may form. These lesions are not confined to the usual locations for acne, are particularly abundant on the extensor surface of the arms, and are recognizable by their central black points and by the fact that the patient is using tar. For its cure all that is necessary is to stop the use of the tar and to soothe the inflamed skin. None of these acnes is a true one. Bromic and iodic acnes will be spoken of under drug eruptions. Derivatives of tar, chrysarobin, and pyrogallol may also produce similar acne-like lesions when applied externally.

Acne Atrophica is a term applied to the scars left by acne, and to acne necrotica. The first needs no description; the second will be found further on.

Acne Cachecticorum is rather to be regarded as a scrofuloderm than an acne, as it probably has little to do with

the sebaceous glands. It occurs in broken-down or scrofulous subjects, and is particularly prone to appear upon the extremities, though it may be disseminated over the whole body. It takes the form of small, congested or dark-red, sluggish, flat papules and papulo-pustules that run a slow course, break down, perhaps ulcerate, and leave small depressed cicatrices. They may aggregate into patches. Occurring on the fingers, these will often be congested and clubbed. The lesions may appear in crops. It occurs in children as well as in adults. It is one of the rare forms of the disease, and requires tonic remedies such as cod-liver oil and iron for its cure.

Acne Cornea. See Keratosis follicularis.

Acné Fluente. See Seborrhœa oleosa.

Acne Follicularis. See Comedo.

Acne Frontalis. See Acne necrotica.

Acne Hypertrophica. See Rosacea.

Acne, Iodic and Bromic. See Dermatitis medicamentosa.

Acne Keloid. See Dermatitis papillaris capillitii.

Acne Keratosa. H. R. Crocker[1] describes this disease as an eruption of finger-nail sized, well-defined, excoriated patches covered with blood crusts located on the cheeks and chin, specially near the mouth. It leaves white, hard scars. It is usually a symmetrical eruption, but the lesions may come out singly or in very small numbers at irregular intervals. The individual lesion begins as a red, firm, tender nodule upon which a pustule forms and dries into a scab. Imbedded in the lesion are one or more horny or soft conical plugs about one-twelfth of an inch long, which give rise to irritation until removed. When removed the lesion heals slowly after weeks or months. The disease is chronic, showing no tendency to recovery. Thus far, treatment has been unavailing.

Acne Medicamentosa. See Dermatitis medicamentosa.

[1] Brit. Journ. Dermat., 1899, xi., 1.

Acne Mentagra. See Sycosis.

Acne Miliaris. See Milium.

Acne Necrotica. Synonyms: A. frontalis; A. varioliformis: A. pilaris; Acne rodens; A. ulcereuse; A. arthritique: A. miliaire scrofuleuse; Lupoid acne. This disease has been most carefully studied by R. Sabouraud,[1] and from his description this article is taken.

The disease begins as a vesicle about a hair follicle. In two or three days the vesicle has attained a diameter of three millimeters, and is round, flat, umbilicated, and slightly raised above the skin. Its contents have become cloudy and it is surrounded by a very circumscribed inflammatory areola which soon disappears. It soon dries up, without opening spontaneously, into a crust that seems let into the skin like a favic crust. The crust is at first yellowish but soon becomes brown. If the crust is raised, it discloses a deep, cup-shaped depression with rugose walls. There is a delicate layer of pus between the crust and the bottom of the depression. Left to itself, the crust falls after many weeks, leaving a large, red, dry depression, which after a time becomes white and remains hairless, the hair usually falling with the crust. Sometimes the original crust enlarges by the formation of a second vesicle about the first, or two vesicles near each other may fuse. If scratched, they may become impetiginous. The sites of predilection for the disease are the nose, temples, forehead, between the shoulder-blades, and over the breast bone. It is most often seen on the temples, and may spread on the scalp or bearded portion of face, causing destruction of the hair. It is not seen before puberty, and continues indefinitely or by relapses in one place or in several, often symmetrical regions. The resulting cicatrices are very disfiguring, and resemble those of variola.

ETIOLOGY. The cause of the disease is not determined. Sabouraud believes that a seborrhœal skin is the predisposing factor, and that a special micro-bacillus is the cause of the disease. The staphylococcus aureus is also found in connection with the disease.

[1] Ann. de derm. et de syph., 1899, x., 841.

PATHOLOGY. J. A. Fordyce[1] finds that the disease begins in and about the hair follicles above the entrance of the sebaceous glands. As the inflammatory process extends it involves the sebaceous glands as well as the superficial portion of the derma, resulting in a necrosis of the pilosebaceous system. In one case he found enormous numbers of staphylococci in the lymph spaces and free in the tissues.

DIAGNOSIS. In some cases the resemblance to syphilis is striking, but the extreme chronicity of it and its occurrence along the hair line distinguish it, as well as its general course of development.

TREATMENT. The ointment of the ammoniate of mercury is efficient in many cases. Sulphur, salicylic acid, and resorcin are also useful. Curetting is also of service. Sabouraud thinks that for the disease when it invades the scalp the best remedy is pyrogallol, either with or without tar or sulphur, fifteen per cent. in ointment or six per cent. in ethereal oil. He also advocates the daily use of alcohol with a little iodine or bichloride of mercury for three months after the disease is apparently well.

Acne Pilaris. See Acne necrotica.

Acne Punctata. See Comedo.

Acne Rodens. See Acne necrotica.

Acne Rosacea. See Rosacea.

Acne Scrofulosorum. See Acne cachecticorum.

Acne Sebacea. See Seborrhœa.

Acne Syphilitica. See Pustular syphiloderm.

Acne Tuberculoide. See Molluscum contagiosum.

Acne Ulcereuse. See Acne necrotica.

Acne Urticata is the name given by Kaposi to a chronic, itching disease occurring on the face, scalp, hands, and, usually, on the extensor surfaces of the extremities. It begins as an acute eruption of bean or larger sized, pale-red, very hard, wheal-like elevations which within a few

[1] Journ. Cutan. and Gen.-Urin. Dis., 1894, xii., 152.

hours to four days undergo involution. They are usually scratched and broken. They leave flat, brown, cicatricial stripes corresponding to the scratches. The itching is so severe as to interfere with sleeping.

Acne Varioliformis. See Molluscum contagiosum and Acne necrotica.

Acnitis. See Granuloma necrotica.

Acrochordon. See Fibroma. The term is also applied to large or small polypoid prominences produced by an overgrowth of the endothelium of the sebaceous glands. These occur in elderly people upon the eyelids and neck. They may attain the size of hazelnuts and look like overgrown milia. The treatment consists in removing them by ligature or scissors.

Acrodynia is a disease closely allied to pellagra in its symptoms, that has been observed chiefly amongst French and Belgian soldiers, and is probably due to some defect in food supplies. It begins with gastro-intestinal irritation, to which certain neuroses soon add themselves, such as formication, hyperæsthesia, and anæsthesia. An erythema of the hands and feet, and it may be of the whole body, followed by desquamation or by brown or black pigmentation, is the cutaneous element of the disease. Recovery usually takes place, though death may occur from diarrhœa.

Acromegaly. A disease characterized by overgrowth of the bones and soft tissues of the face, hands, wrists, and feet. It is a rare condition and is allied to elephantiasis. It is a progressive and, usually, symmetrical disease, and at times attains immense proportions. The skin becomes dry and harsh, yellowish and wrinkled. Fibromata may develop. Symptoms of nervous derangement are also present. The cause is unknown and treatment is of no avail.

Actinomycosis. While this is usually a disease of cattle, in which it causes tumors of the jaws, it may attack man and produce nodular tumors with fistulous openings. It

is due to the invasion of the tissues by the ray fungus. Infection usually occurs by the mouth along a carious tooth, but it may take place through the digestive tract, the lungs, and, rarely, by an abrasion of the skin. The incubation period is about four weeks. The tumors bear a strong resemblance to sarcoma and are livid or bluish red. At first firm, they after a time soften and break down and discharge through a fistulous tract, at first a purulent, afterward a sanious material, in which are numerous yellow granules, from pinhead to hemp-seed size. The disease runs a chronic course. Its prognosis is bad. Iodide of potassium in ten- to fifteen-grain doses three times a day is well spoken of by M. Morris,[1] and may be combined with the insertion into the sinuses of a one per cent. solution of the same drug. If this fails, surgical procedures may be resorted to.

Addison's Keloid. See Morphœa.

Adeno-carcinoma is a carcinoma originating in the glands of the skin, most often in the sweat glands.

Adenoma. These are glandular tumors, and are due to a proliferation of the lining cells of either the sebaceous or sweat glands. There are, therefore, two varieties: A. sebaceum and A. sudoriferum. Though met with in persons of mature years, it is not improbable that they are congenital defects. They form solid tumors from pinhead to egg size or larger. They may remain stationary or grow; may disappear spontaneously, ulcerate, form cysts, or undergo hyaline, colloid, or fatty degeneration. While usually benign, they may become malignant. They tend to relapse after extirpation.

The *sebaceous form* is encountered most often on the face, about the nose and mouth; less frequently upon the scalp, but may occur anywhere. The color of these adenomata varies from pale yellow to red, when they will have fine telangiectases over them. They occur most often in women, are generally multiple, often with an uneven surface, and seated deep in the skin. Pollitzer

[1] Lancet, 1896, 1, 1553.

has cured one case of the sebaceous variety by means of multiple scarifications.

The *sudoriferous variety* occurs upon the head, neck, and extremities as dirty grayish-white tumors, sometimes in groups, with uneven, often knobby surface. They are rare lesions of the skin, difficult of diagnosis, and require extirpation or total destruction for their cure. Most cases formerly described under this heading are now regarded as cases of multiple benign cystic epithelioma, which see.

Ainhum is a disease most frequently seen in the negro race, though a number of cases have been reported from India. It is seen in men more often than women, and several members of the same family have been known to be affected by it. The little toe of one or both feet is the one usually diseased, though the other toes do not always escape. It begins as a furrow on the inner and lower side of the proximal end of the toe, which gradually extends outward and upward so as to encircle the whole toe at its juncture with the foot. In the meantime the toe becomes enlarged, separates from its next neighbor, and rotates outward. When fully developed the toe wobbles about so that it interferes with walking. The whole process is unattended with ulceration, except accidentally caused and after the disease has lasted a long time. When it occurs the toe falls off. There is little pain experienced till near the end of the disease. It takes from one to fifteen years for the full development of the disease. The cause is unknown, though traumatism probably plays a part. The process is one of progressive degeneration and destruction of all the elements of the toe—skin, muscles, bone. In its early stage a deep incision perpendicular to the direction of the furrow may check its course. Later, amputation is required for the cure, and healing takes place rapidly.

Albinism. See Leucoderma.

Aleppo Boil, Aleppo Bouton, or **Aleppo Evil,** is an ill-defined furuncular disease occurring in Syria and the Levant, where it is endemic and widespread. One or more pea- or bean-sized pustules appear that slowly grow and ulcerate

indolently. Large ulcerating, granulating patches may form. The extremities and face are the parts most often affected. All ages and conditions contract the disease. One attack usually protects against subsequent infection. Treatment is not very satisfactory. Painting the papules with tincture of iodine is recommended. Ulcers are to be treated on surgical principles.

Algidite Progressive. See Sclerema neonatorum.

Algor Progressivus. See Sclerema neonatorum.

Alopecia. Synonyms: Calvities; (Fr.) Alopecie; (Ger.) Kahlheit; (Ital.) Calvezza; (Sp.) Calvez; Baldness.

By alopecia is meant a partial or general loss of the hair, so as to produce a noticeable thinning or a bare spot. There are four main varieties, namely: Alopecia adnata; Alopecia senilis; Alopecia præmatura or præsenilis; and Alopecia areata.

Alopecia Adnata is congenital baldness, and is a rare affection.

Symptoms. The newborn child is covered with long, dark hair which soon falls to give place to fine lanugo hairs; or this change has taken place before birth, the usual course of events, and at birth lanugo hairs only are present. In alopecia adnata there is not the slightest trace even of lanugo hairs either on the scalp or eyebrows. In some cases the baldness is not so complete. Most cases, after months or years, recover either altogether or partially, but in some cases the hair never grows. In pronounced cases delayed dentition or deficiency of the teeth has been observed.

Etiology. The cause of the disease is arrest of the development of the hair, probably due to an error in innervation. It is said to be hereditary in some families.

Pathology. There is a complete absence both of hair and hair papillæ. There are some abortive hair follicles. Otherwise the scalp is normal.

Treatment. The treatment is mainly an expectant one. The nutrition of the child should be looked after and the scalp kept in a healthy condition. If this expect-

ant plan does not satisfy the child's attendants, some of the stimulating hair washes, as in alopecia præsenilis, may be prescribed for the moral effect upon them.

Alopecia Senilis is baldness occurring in advancing years. Any loss of hair commencing about the forty-fifth year and without apparent cause may be placed under this heading. Graying of the hair may have preceded it for several years or may be coincident with it. Or the hair may fall without becoming gray. The hair fall having once begun is progressive, though its rate of progress may be slow or fast. It usually shows itself first upon the vertex of the head, forming the tonsure, which slowly increases in size and, moving forward, renders the whole top of the head bald. Or it may begin anteriorly and move backward. Or the hair on the whole top of the head may become thinned at once. Rarely are the temporal and occipital regions bald, and an island or tuft of hair is sometimes preserved for a long time in the middle frontal region. The hair fall is always symmetrical and the bare scalp is smooth, oily, shiny, and appears as if stretched. Not only does the hair fall from the scalp, but it may fall from the axillæ and pubic region; these manifestations I believe to be more common in women than men. Very rarely does the beard fall.

ETIOLOGY. The cause of this form of baldness is a progressive atrophy of the scalp. Men are far more prone to the disease than are women.

TREATMENT. As to the treatment we can do nothing. Prophylaxis, as described under Alopecia præmatura, will delay its onset.

Alopecia Præmatura is baldness occurring before middle life. It may be idiopathic or symptomatic.

Alopecia præmatura idiopathica arises without any evident disease of the scalp or disorder of the general health. It usually begins in early life, between twenty-five and thirty-five; it may begin as early as the eighteenth year. Its general course is the same as the senile form of alopecia. Very often the upper parts of the temples are earliest affected, the hair line receding. In those who part the

hair in the middle, the thinning of the hair about the part may be the first thing to attract attention. The process of the hair fall is one of progressive thinning of the individual hairs at first, and then of the whole quantity of hair, so that strong hairs give place to lanugo hairs, and these in turn fall and leave bald places. At the same time a progressive tightening of the scalp upon the skull will be observable in some cases, the scalp having lost that cushion of fat that is under it in early life. The hair fall having begun is progressive, though years may elapse before there is absolute baldness. The tonsure may not enlarge for a long time, and then increases rapidly in size.

ETIOLOGY. The main cause of this form of baldness is heredity. Fathers and sons for generations may grow bald early, or the inherited peculiarity may have to be traced to the grandparents or some collateral line. Not all the children of one family in which baldness is hereditary are bald, but it will manifest itself in two or three of the children. According to Pincus,[1] inheritance and chronic eczema or an impetiginous eruption on the scalp in the years preceding puberty are the only predisposing causes of baldness. Insufficient or improper care of the scalp; daily sousing of the hair with water, combined with improper drying of the hair afterward; sweating of the head, either spontaneously or on account of the wearing of unventilated or hot head-coverings; constant mental strain, either on account of intellectual work or of worry; the wearing of stiff, unyielding hats; gout; all diseases lowering the general nutrition; and dissipation, are all put forth by reputable observers as causes of premature baldness.

That women are less often bald than men probably depends upon several factors: The fatty cushion beneath their scalps is longer preserved than in men; they give more attention to the care of the hair and less often wet it; and their hats are soft, ventilated, and fit loosely.

TREATMENT. We can do more for this form of baldness by prophylaxis than by attempts at making the hair that has fallen out grow in again. Prophylaxis should

[1] Virchow's Archiv, 1867, xli., 322.

begin at the beginning of life, and should be continuous. This is of special importance in the case of children in families prone to early loss of hair.

The *hygiene of the scalp* is the chief part of the prophylactic treatment. Beginning in infancy, the scalp should be gently cleansed of the vernix caseosa and other extraneous substances that have gathered on it during the process of parturition. This should be done by the gentle use of soap and water after rubbing in a little sweet almond or other bland oil. No force should be used, and after the scalp is washed it should be patted dry with a soft, warm cloth, and a little oil or vaseline smeared over it. After the first washing it should be oiled daily and washed every second day. When the hair begins to grow, a soft brush alone should be used to arrange it, and the daily oiling may be stopped, unless sebaceous matter accumulates in cakes, in which event the oiling should be continued. Sometimes it is well to add a little sulphur to the oil or vaseline, but in most cases it is unnecessary. The slightest indication of disease of the scalp should be promptly and properly dealt with. A child's hair should be cut short, not cropped close to the head. After a girl has reached her eighth or ninth year the hair should be allowed to grow.

The hair and scalp do not need to be washed more than once in two or three weeks, and for this purpose any good soap will do, with plenty of water to wash out the soapsuds. Borax with water will clean the scalp nicely, but its continuous use is injurious. The yolk of three eggs beaten up with lime-water makes an elegant shampoo. The daily sousing of the head in water should be prohibited. Deep brushing of the hair with a long-bristled brush of sufficient stiffness to warm, but not scratch, the scalp is one of the best agents we have for stimulating the scalp. The brushing should be done daily and systematically.

Pomades and hair washes should be avoided unless there is some evident disease of the scalp. Women should be cautioned against pulling their hair into artificial and constrained positions. It is most important that a sufficient

amount of out-door exercise should be taken to aid in keeping the patient in good general condition.

When the hair has begun to fall it is important that the hygiene of the scalp should be begun, if not already practised. We can do more for our cases in this way than by any other method.

Many remedies have been advised for the curative treatment of baldness. Pilocarpine, in hypodermic injections or in ointment form, has been warmly commended. Lassar[1] prescribes it as follows:

℞	Hydrochlorate of pilocarpine,	gr. xxx;	2	
	Vaseline,	ʒv;	20	
	Lanolin,	ad ʒij;	ad 60	
	Oil of lavender,	gtt. xxv.	1	66 M.

It may also be used in the form of the fluid extract of pilocarpus, ten to fifteen per cent. strength in dilute alcohol. He also advises oil of turpentine, equal parts with an indifferent oil or alcohol. It is my experience that most of these cases do better with oily than with alcoholic preparations. Gallic acid, three per cent., in an oily excipient; tar; galvanism; massage; tincture of cantharides (ʒj–ℨj); tincture of nux vomica (ʒj–ℨj), and a lot of other irritants and essential oils have their advocates. My experience teaches me that so-called "hair tonics" are of little value, and that the best remedies are attention to the general health of the patient, massage to the scalp, and daily, systematic and deep brushing of the hair. Pilocarpine is the only drug that has shown any decided influence on hair growth.

PROGNOSIS. The prognosis of this form of baldness is bad, and especially so if the disease is hereditary and the patient is more than thirty years of age. It is better with women than with men, as they will give more time to the care of their scalps and show less tendency to alopecia.

Alopecia præmatura symptomatica is premature baldness in which there is some evident disease of the scalp or disorder of the general nutrition of the body to account for it. It has four varieties: Alopecia furfuracea seu

[1] Therap. Monatshefte, 1888, No. 12.

pityrodes, A. syphilitica, Defluvium capillorum, and A. follicularis.

Alopecia Furfuracea seu **Pityrodes** is the form most frequently met with and the one in which we can often obtain good results by treatment. In my experience seventy per cent. of all cases of loss of hair are of this variety.

Symptoms. In it we have an evident disease of the scalp to deal with—that is, dandruff. By this we mean either a seborrhœa with fatty crusts, or else a pityriasis with more or less abundant scaling. Both these conditions are now regarded as different forms of eczema seborrhoicum.

Alopecia pityrodes has two stages: The first one lasts from two to seven years or more, and is attended by a greater or less amount of dandruff and by dryness of the hair. Then comes the second stage, when the hair falls more or less rapidly. Its course may be the same as that of the two previously described forms of baldness, though more commonly the whole top of the head is affected at once, the hair becoming progressively thinner in diameter and less in amount until baldness results. As the baldness increases the dandruff lessens. The disease is one of early life in a large number of cases, often occurring between the twentieth and thirtieth year, and affects both sexes.

Etiology. The cause of the hair fall is the dandruff. By this it is not meant that everyone who has dandruff will become bald. Everyone's experience is against that. But it is true that in certain persons when, on account of some error in the nutrition of the sebaceous glands, they become diseased, the hair follicles sympathize with them and after a time the hair production ceases. Of late the opinion is gaining ground that alopecia pityrodes is contagious, and the experiments of Lassar and Bishop[1] would seem to prove this. They succeeded in producing typical alopecia pityrodes in guinea pigs by rubbing into their backs a pomade composed of the scales taken from the head of a student who was afflicted with the same disease. A number of observers have reported from time to time

[1] Monatshefte f. prakt. Dermat., 1882, i., 131.

the finding of a parasite in this disease, but as yet no one micro-organism can be demonstrated as positively at the bottom of the trouble. Sabouraud [1] believes that the same parasite that produces the seborrhœa produces the loss of hair. It is according to him a micro-bacillus that grows down into the hair follicle between its wall and the hair and causes atrophy of the hair papilla.

TREATMENT. The treatment of this form of baldness must be addressed to the cure of the seborrhœa or pityriasis that causes the loss of hair. Prophylaxis is here again more important than the use of remedies for promoting the growth of the hair. The treatment of seborrhœa and pityriasis will be considered under their respective headings, and need not be here detailed. My belief is that greasy applications are better than those containing alcohol. The mistake is frequently made of prescribing tincture of cantharides or other irritant because the hair falls. Of course, these things, in an already more or less inflamed scalp, only do harm. If we can succeed in curing the seborrhœa, the hair will take care of itself. If the case comes to us before absolute baldness is established, we can feel pretty confident that we can stop, or at least delay, the fall of the hair. But we must inform our patients that it is only by long and persistent treatment that we can accomplish anything.

Lassar's plan of treatment has gained great currency, and is as follows: The scalp is to be vigorously washed each day with a tar soap that forms plenty of suds. The soapsuds are to be washed out with warm, followed by cold, water, the scalp dried and anointed with solution of bichloride of mercury (2 : 1000). This is to be dried out by applying 0.5 per cent. solution of β-naphtol in absolute alcohol. Finally, an oil made up of

℞	Ac. salicylici,	ʒss;	2	
	Tincture of benzoin,	gr. xl;	3	
	Neat's-foot oil,	ʒiij;	100	M.

is to be applied. The procedure is to be kept up for six to eight weeks. I have found few patients who would

[1] Ann. de derm. et de syph., 1897, viii., 257.

persist in it, and in these I have seen little good result. For women it is impracticable.

Resorcin has been commended. It may be prescribed as follows:

℞	Resorcin,	gr. xv;	3	
	Ol. ricini,	℥ss;	6	
	Spts. vini rect.,	ad ℥j;	ad 100	
	Bals. Peruv.,	gtt. ij;	gtt. ij.	M.

Sabouraud recommends the use of a pomade containing sulphur, oil of cade, and yellow oxide of mercury on three evenings of the week, and on the following mornings to wash the scalp with soap and water, and rub with a brush charged with a two per cent. solution of resorcin in equal parts of alcohol and ether.

Tar is a good remedy, but it is objectionable on account of its odor and color. β-naphtol, in five to ten per cent. strength, and hydrate of chloral in about the same strength, may be tried. Sulphur is the most reliable remedy. Its efficacy is increased by the addition of ten to fifteen per cent. of the extract of pilocarpus, and the best way of using sulphur is in unguentum aquæ rosæ or cold cream. Further particulars in regard to the treatment of the seborrhœa will be found under the section upon that subject. When there is absolute baldness it is questionable if anything will make the hair grow.

Alopecia Syphilitica may be an early or late manifestation of syphilis; it occurs both in benign and malignant cases, and manifests itself as a more or less general and temporary hair fall, or as a localized, destructive, and permanent one.

Symptoms. The former variety occurs early in the disease, and is a thinning of the hair in irregularly shaped patches scattered over the scalp, giving to it an appearance similar to what would be produced by cutting the hair carelessly with a dull pair of shears. In rare cases we may have a general loss of hair from all hairy regions. The broken arch of the eyebrow is always suggestive of syphilis. There may be some seborrhœa with this form of alopecia.

Localized baldness is one of the later manifestations of syphilis, and is always preceded by a destructive disease of the scalp. The bald spots will vary in size with the extent of the destructive process, which may be one of absorption or ulceration.

DIAGNOSIS. The diagnosis of syphilitic alopecia is made by observing the irregular shape of the patches and that they are not completely bald, and by the occurrence of the broken arch of the eyebrow. These should arouse suspicion, when other symptoms of the disease will be found. It most resembles alopecia areata, but in this disease the patches are perfectly circular or oval and entirely bald.

The baldness due to destructive forms of syphilis can be confounded only with that of *favus*. In the latter disease the scalp preserves a reddish color for a long time, and then assumes an atrophic, smooth, cicatricial look, which is characteristic of it. The history of the two cases is very different, as in favus we do not have ulceration, and we do have cupped, sulphur-yellow crusts. Favus is also more widespread and disseminated than is late syphilis of the scalp.

TREATMENT. The treatment of this form of baldness is that of the underlying disease. A mercurial ointment or an oil containing the bichloride may aid in hastening the new growth of the hair in the early form of baldness. The late form may be lessened by active constitutional and local treatment, according to the general principles laid down for the management of syphilis.

Defluvium Capillorum is that sudden and general fall and manifest thinning of the hair which come on during or after some severe illness, such as parturition, fevers, mercurialism, and various cachexiæ.

SYMPTOMS. Rarely does it produce complete baldness. The fall is usually rapid and takes place during convalescence or after recovery, rather than during the course of the disease. It may not occur until three months after the illness. Seborrhœa may or may not be present.

ETIOLOGY. The cause of the hair fall is the profound

disturbance of the nutrition of the body, in which the hair sympathizes.

TREATMENT. The treatment is rather to be addressed to the patient than to the hair. If we can succeed in building up the patient's strength, the hair will take care of itself. The scalp should not be shaved. Local treatment is the same as in alopecia pityrodes.

Alopecia Follicularis is baldness due to some disease of the scalp that either destroys the hair follicles or impairs the proper performance of their function. A history of the causative disease may be obtained, or the disease itself will be present. Impetigo; long-continued sycosis; inflammatory diseases, such as erysipelas; parasitic diseases, such as favus and ringworm; and destructive new growths, such as syphilis and lupus, all may cause alopecia follicularis.

The etiology, diagnosis, prognosis, and treatment of this form of baldness are the same as the disease that gives rise to it, for which we must refer to the proper sections.

Alopecia Areata. Synonyms: Area celsi; Area occidentalis diffluens, seu serpens, seu tyria; Alopecia circumscripta; Porrigo seu tinea decalvans; Vitiligo capitis; Ophiasis; Phyto-alopecia; (Fr.) Teigne pelade; Pelade; (Ger.) Die kreisfleckige Kahlheit; Circumscribed baldness.

This form of baldness usually begins suddenly, the patient discovering by accident, or being told by someone, that he has a bald spot. Sometimes, on waking in the morning, the patient is astonished to find loose hairs in his bed, and, on looking in the glass, to see that he has a bald patch on his head. In some cases the hair fall may have been preceded for days or weeks by neuralgic pains in the head. In most people there are no premonitory symptoms, and, apart from the bald spots, no discomfort on the part of the patient nor cutaneous lesions. The neuralgia may continue after the hair fall or it may cease. There may be but one bald patch or there may be a dozen patches. A patch may be as small as a three-cent silver piece or as large as a silver dollar. If larger—and the whole head may be completely bereft of hair—the patch is formed by the coalescence of several smaller ones. A

patch may attain its full size at once or it may slowly enlarge, spreading at the periphery. The patches are more or less perfectly oval or circular in shape and sharply defined against the surrounding hair. Patches formed by the coalescence of other patches lose the oval outline and may have a scalloped border. The color is usually that of the normal scalp; it may be pale or hyperæmic. The patch is perfectly bare and smooth, without scales, as a rule. Sometimes it is dotted over with short, broken hairs, old roots that soon fall out. Sometimes it looks as if it were

FIG. 9.

Alopecia areata.

depressed, an appearance due to falling out of the hair roots. Sometimes there is more or less seborrhœal dermatitis of the scalp. Any or all the hairy regions of the body may be affected, the patient sometimes being entirely denuded of hair. Most often it is the scalp that suffers, especially the temporal and occipital regions. The bearded portion of the face may be affected alone. Around the border of a recent patch the hair is loosened so that it may be readily extracted. The sensibility of the skin may be diminished. Generally it is preserved.

The course of the disease is chronic, with a strong

tendency to spontaneous recovery in anywhere from three months to several years. Recovery is heralded by the growth of a fine down upon the bald patch. This will fall out and be replaced by lanugo hairs that in their turn will fall out to be replaced by stronger hairs, until normal hairs grow at last, though these at first may be white. Some cases relapse year after year; in some cases the hair never grows beyond the lanugo stage; and some cases remain permanently bald.

FIG. 10.

Alopecia areata.[1]

ETIOLOGY. The subjects of the disease may be in apparently perfect health, but not infrequently they are of very nervous temperament, exhausted by overwork or nervous strain, or out of health in some way. Both sexes are affected, the male sex rather more than the female. It occurs very often in children. Thus Crocker, who has a large experience with children, met with it in children under twelve years old thirty-seven times out of eighty-three cases. The youngest case reported was at two years of age, and cases have been seen as late as in the sixtieth year. It is rather more frequent among the poor than among the well-to-do. It is more frequent in some countries than in others. Thus Crocker's tables show that in

[1] By the courtesy of Dr. S. Dana Hubbard.

London it forms two per cent. of all skin cases; Bulkley's tables show but a little more than one-half per cent. in New York.

The disputed points in the etiology of alopecia areata are its contagiousness, and whether it is a neurosis or a parasitic disease. At the present time it is impossible to decide with absolute certainty which of the contending parties is right. Most instances of contagion have been reported by French observers whose diagnostic skill we can hardly call in question. They have reported instances in which a large number of cases have appeared in barracks or schools, and from there spread to neighboring towns. In England similar apparent epidemics have been reported, but as a fungus indistinguishable from the trichophyton fungus was found in the surrounding hairs they were doubtless instances of bald ringworm. It is possible that some of the French epidemics were of similar character. In this country one epidemic apparently of alopecia areata has been reported by Putnam.[1] The cases were examined by Drs. J. C. White and J. T. Bowen, of Boston, who agreed in the diagnosis. Nothing suggestive of trichophytosis was found. Isolated instances of apparent contagion have been reported by various physicians. Certainly the body of experience is against the contagiousness of the disease. Besnier and Doyon,[2] who believe firmly that the disease is contagious, think that it is transmitted most often by means of the barber's utensils, especially the patent hair clippers, and that it is impossible in a great number of cases to trace the contagion. Hutchinson and some other English authorities are inclined to the belief that in many cases ringworm preceded the appearance of the bald spots at a greater or less interval.

As to the parasitic origin of the hair fall, it is not yet proven. A goodly number of skilled microscopists have described the fungus, but they do not agree among themselves. Still, it is assumed that a micro-organism will be demonstrated at some time. O. Lassar[3] thinks that the

[1] Arch. Pediat., 1892, ix., 595.

[2] Path. et Trait des Mal. de la Peau: Kaposi. French edition, Paris, 1891.

[3] Dermat. Zeitschrift, 1900, vii., 809.

phenomenon can be best explained on the theory of a virus due to a micro-organism.

This leaves only the neurotic theory. Many dermatologists believe the disease to be a tropho-neurosis. It has been known to follow blows or injuries to the head, moral or mental shock, operations on the neck, and, experimentally, injury to or extirpation of the second cervical ganglion in cats.

Perhaps the disease should be regarded rather as a symptom due to a disturbance of the nutrition of the hair depending sometimes on microbic infection, at other times on a tropho-neurosis. For the present no decisive answer can be given to the question: "What is *the* cause?"

PATHOLOGY. Though hairs taken from the margin of an advancing area show atrophic changes, there is nothing distinctive about such changes. A. R. Robinson[1] found evidences of inflammation, and some round-cell infiltration confined principally to the perivascular region. In recent cases there was a coagulation of lymph in many lymphatics, and of fibrin in a few of the large and small arteries, with, in old cases, a thickening of their walls. In recent cases the hair follicles were either without hair or contained a lanugo hair or a hair just about to fall. The hair-roots, where present, showed atrophic changes. In advanced cases the sebaceous glands were degenerated or had entirely disappeared. In the worst cases there was complete atrophy of the hair follicles and of the subcutaneous fatty tissue. He also describes the presence of various cocci in the lymph spaces of the corium and the walls of a few of the vessels, which he regards as the cause of the disease. Sabouraud[2] in making his exhaustive studies of ringworm, was led to investigate alopecia areata. The characteristic hair in the disease has the shape of an interrogation point. The upper part is normal and pigmented, while the lower part is atrophied and devoid of pigment. He found in the upper third of the diseased follicles an ampullar swelling which he names the *utricle peladique*. This is filled with compact clusters of

[1] Monatshefte f. prakt. Dermat., 1888, vii., 409.
[2] Ann. de. derm. et de syph., 1896, vi., 253.

micro-bacilli, the smallest known. These microbes he regards as the probable cause of the disease. They gain access to the follicles and set up a reaction, followed by atrophy of the hair follicles and papillæ. The disease is, therefore, one of the follicles and not of the hair. Sabouraud's views have not been generally accepted as yet, nor does he regard the case as closed.

DIAGNOSIS. A typical case of alopecia areata is so peculiar that there is little danger of mistaking it for anything else. It differs from *trichophytosis capitis* in its sudden onset, its perfectly bare, smooth, non-scaly surface, without broken, split, and gnawed-off hairs, and in the absence of the trichophyton fungus from the hair and scales taken from the neighboring parts. In bald ringworm patches, which resemble alopecia areata, the fungus will be found in the neighboring hair, or some characteristic "stumps" will be found on the scalp. In adults ringworm of the scalp is very rare. It differs from *favus* in the absence of cupped crusts at any time in its course, in the scalp not presenting that cicatricial appearance always met with in favic baldness, and in complete absence of fungous growth.

The baldness due to *syphilis* may resemble that of alopecia areata, but other symptoms of syphilis will be present, and there will never be a history of the formation of well-defined oval or circular areas. *Lupus erythematosus* at times affects the scalp and produces circumscribed bald areas; but these are not oval or round, and the skin is red and scaly, and evidently cicatrized. The *alopécie innominée* of Besnier is extremely difficult to diagnose from alopecia areata. It differs in not forming regular oval or round bald areas, but rather irregular ones, with clumps of hair at their borders; in having a cicatricial appearance, and in presenting, at first at least, some evidences of dermatitis or folliculitis. This type of baldness has not yet become well recognized.

TREATMENT. In a disease that is essentially self-limited it is hard to estimate how much good our remedies do. One duty we have without peradventure, and that is, to look after the general condition of the patient. A large

number of the cases require a stimulating and tonic treatment—iron, quinine, strychnine, arsenic, cod-liver oil, or hypophosphites. Children should be taken out of school and allowed to run free. Our hardest task will be to manage those nervous patients who are ever a trouble to us.

As far as local treatment is concerned, it may be summed up in two words: patience and stimulation. As many of our parasiticides are stimulating to the skin, they may be used with benefit whether we believe in the parasitic cause of the disease or not.

The stronger water of ammonia dabbed on to the scalp by means of a swab, care being taken to guard the eyes, will be beneficial in some cases. It is remarkable how little reaction this powerful remedy will cause in alopecia areata. Pilocarpine, in hypodermic injections, or in ointment form, is at times beneficial, combined with sulphur ointment and well rubbed in. I have seen the hair come back promptly in a few cases so treated and of normal color. Painting the scalp with acetic acid until it whitens, and then sponging off with cold water, and repeating every three or four days; chrysarobin, fifteen to thirty grains to the ounce, well rubbed into the scalp once a day; carbolic acid (95 per cent.) applied every two weeks or so to small areas at a time; the bichloride of mercury, two to four grains to the ounce in alcohol, or oleum pini sylvestris; the oleate of mercury, in the strength of two to ten per cent.; blistering with cantharides, or 33⅓ per cent. of iodine in collodion; and galvanism, have one and all been followed by the return of the hair.

Moty[1] reports good results from hypodermic injections of bichloride of mercury, injecting five or six drops of an aqueous solution (1 : 500) into many places about each patch. In a later number of the same journal he announced that he then used a four per cent. solution of the mercury, with a two per cent. solution of cocaine; that he made but a single-drop injection in a medium-sized patch, and four or five injections about a large patch, and at its periphery. Pauses of four days were taken between the injections, and a cure is expected after the fourth series.

[1] Ann. de derm. et de syph., 1891, ii., 406.

Scheffer[1] is also an advocate of bichloride injections. He first rubs the patch with 90 per cent. alcohol. He then draws into the syringe ¼ c.c. of 1 : 1000 solution of bichloride of mercury; then ¼ c.c. of 0.5 per cent. solution of pilocarpine; and then ¼ c.c. more of the bichloride. He injects this as horizontally as possible beneath the skin of the patch at its edge and repeats at one centimetre distance, using about twelve injections for a patch the size of a silver dollar. This is repeated in four or five days. The hair begins to grow in about three weeks.

Sabouraud[2] advises in single-patch cases cutting the hair short, epilating about the patch, and rubbing the patch every second day with one part of Bidet's vesicating liquid and three or four parts of chloroform. Every morning the whole scalp is to be rubbed with

℞	Alcohol. camphorat.,	℥iv;	125	
	Spts. terebinthinæ,	℥v;	25	
	Aquæ ammoniæ,	℥j;	5	M.

If the patch is very large, instead of the cantharidal solution use

℞	Ac. acetici crystal.,	gr. i-iij;	.065–.194	
	Chloral.,	℥j;	4	
	Æther.,	℥j;	32	M.

From time to time the patch should be shaved as the young hairs come in, while the strength and the number of applications of the strong solution should be lessened. In obstinate cases he applies a blistering fluid at night to a limited area, opens it the next morning and paints the surface with nitrate of silver solution. The surface is to be covered with absorbent cotton. This is to be repeated every week.

Lactic acid in 50 per cent. aqueous solution is highly commended by Balzer.[3] Alcohol or ether is to be used first to remove the fat from the part, and then the acid is

[1] Méd. moderne, May 19, 1900.

[2] Diagnostic et traitement de la pelade et des teignes de l'enfant. Paris, 1895.

[3] Monatshefte f. prakt. Dermat., 1900, xxx., 43.

to be rubbed in with a tampon until the scalp reddens. Use daily. If reaction is too great, omit for a few days and use borated vaseline. A cure may be expected in two to three months.

It is advisable to pluck the loose hairs from around the patch for a zone of perhaps an eighth or a quarter of an inch. Every few days slight traction is to be made on the hairs surrounding the patch and all the loose ones pulled. Massage is also useful.

Prognosis. Even if left to itself, the chances are that the hair will grow in again. This good prognosis should be guarded when the patient is past middle life and in those malignant cases in which there is complete baldness that has lasted several years.

Alopecia Circumscripta. See A. areata.

Alopécie Innominée. See Folliculitis decalvans.

Alphos. See Psoriasis.

Anæsthesia is a loss of sensation in the skin which occurs in a number of diseases of the nervous system, notably in hysterical affections. It may be general or partial, or affect but one-half of the body. There may be loss of sensibility to pain while the tactile sense is preserved (*analgesia*), or intense pain with loss of ordinary sensibility (*anæsthesia dolorosa*). There are many substances which, locally applied, will cause anæsthesia, such as carbolic acid, cocaine, aconite; and many others which will abolish sensation when taken internally. The subject belongs to the domain of the neurologist.

Anatomical Tubercle. See Tuberculosis verrucosa cutis.

Angio-keratoma[1] is the name given by Mibelli to a peculiar disease of the skin of the hands, feet, and ears that has been called telangiectatic warts, or verrues telangiectasiques.

Symptoms. It follows chilblains or exposure to cold, and affects principally the dorsal aspects of the hands and feet, though their plantar surfaces may be involved to a

[1] Brit. Journ. Dermat., 1891, iii., 237.

slight degree. The eruption consists in tiny, almost imperceptible, pink points that do not disappear on pressure; of pin-point to pinhead sized darker spots that can be made almost to disappear on pressure, leaving a deep-red

FIG. 11.

Angio-keratoma. (MIBELLI.)

capillary loop in the center; and of clustered telangiectatic points forming small irregularly shaped, slightly elevated groups. These groups may be as large as a split pea or bean; they may project for half a line above the surface, are hard, rough, warty-looking, and of dull purplish-brown color. Pressure upon them brings out the telangiectatic character of the growths. When pricked with a needle free hemorrhage takes place. The eruption is symmetrical as a rule, and usually affects more than one member of a family. It

begins in early life usually, though it may occur later. There are no subjective symptoms.

PATHOLOGY. J. A. Fordyce[1] found in his case that the lesions were composed of lacunar spaces filled with blood, occupying the papular portion of the derma. He thinks that the vascular changes are primary.

TREATMENT. The treatment that proves most beneficial is destruction by electrolysis.

Angioma Pigmentosum et Atrophicum is the name proposed by R. W. Taylor for the xeroderma of Kaposi, and is described in this book under Atrophoderma pigmentosum, which see.

Angioma Serpiginosum. This is a rare disease, of which but few cases have been reported. White[2] describes the disease as beginning as minute papules that slowly increase to the size of a pea and then undergo spontaneous involution in the central portions, while they spread outward in an annular form to an indefinite extent and for an indefinite period. By the end of ten years the circinate patches may be no larger than one or two inches in diameter. The margin of the rings is elevated and of uniform breadth. New foci continually develop at a distance of one-eighth to one-third of an inch beyond the older areas. These, in turn, are converted into rings in the same way. The lesions are firm and smooth and are of bright-red to claret color. The center of the rings is not elevated, and remains of a dull pinkish-brown tint. There are no subjective symptoms. White's case was on the right shoulder. Other cases have been on the arm, cheeks, and legs.

Most of the cases develop in early life. The pathology is undetermined. In White's case the growths were composed mostly of endothelial cells and the disease was thought to be of sarcomatous nature. Electrolysis or destruction by cauterization is to be used in the treatment of the disease.

Anhidrosis or Anidrosis. By this is meant an affection of the sweat glandular apparatus attended by a diminution

[1] Journ. Cutan. and Gen.-Urin. Dis., 1896, xiv., 81.
[2] Ibid., 1894, xii., 505.

or more or less complete suspension of its functions. It is a symptom rather than a disease. It may be local or general; temporary or permanent; symptomatic, as in fevers and diabetes; congenital, as in xeroderma; or neurotic. Some people never sweat perceptibly. In certain skin diseases, such as psoriasis, scleroderma, squamous eczema, and ichthyosis, the affected areas do not sweat. Its treatment is tonic by exercise and bathing. In symptomatic cases we must strive to remove the underlying cause. For congenital cases we can do nothing.

Anonychia means congenital absence of the nail.

Anthrax. See Carbuncle and Pustula maligna.

Aplasie Moniliforme. See Trichorrhexis nodosa.

Area Celsi. See Alopecia areata.

Argyria is the blue or black discoloration of the skin and mucous membranes due to the deposition of particles of silver in the rete, sweat glands, and about the hair follicles, where it turns black by exposure to the sunlight. It used to be seen more often when silver salts were administered in the treatment of epilepsy than it is now. It occurs also in workers in metallic silver, minute particles of the metal becoming fixed in the tissues. It is a permanent staining.

Arthritide Pseudo-exanthématique. See Pityriasis rosea.

Atheroma. See Sebaceous cyst.

Atrichia. See Alopecia adnata.

Atrophia Pilorum Propria. Atrophy of the hair exists under two forms, namely, Fragilitas crinium and Trichorrhexis nodosa. In both forms the hair shaft is easily friable and splits or breaks of itself or by the slightest traction.

Fragilitas Crinium. This disease has been called *scissura pilorum*, and has for its distinguishing feature splitting of the hair. The cleft is usually at the free extremity, and at times runs some distance up the shaft.

The split hairs are either scattered here and there through the otherwise normal hair, or all the hairs of the part are split. The disease occurs most often upon the hair of the scalp, the beard being the place next most frequently affected. It is a common occurrence in the long hair of women. The shaft may be split into two or more fibrillæ, and these spread out from each other simply or curve up upon themselves. The cleft may also occur in the middle of the shaft or at its exit from the follicle, and in the latter case the shaft will be split throughout its entire length, the segments either separating or holding together. Duhring[1] has reported a case occurring in the beard in which the hair began to split within the bulb. Besides the splitting, the hair may show no other abnormality, but it is generally more dry and brittle than normal, and may be irregular and uneven in its contour. The bulb of the hair may be normal or atrophied.

Etiology. The cause of the idiopathic fragilitas crinium is yet undetermined. The disease is, without doubt, due to some interference with the nutrition of the hair, probably a yet undetermined tropho-neurosis. It is often seen in connection with a seborrhœal dermatitis of the scalp.

Treatment. When occurring only at the free end of long hairs they should be cut above the cleft. In all cases the scalp should be kept in good condition, as directed under Alopecia præmatura. If the disease occur in the beard, shaving would at least remove the deformity and possibly cure the disease.

Trichorrhexis Nodosa. Synonyms: Trichoclasia; Trichoptylose; Clastothrix.

Symptoms. The disease most often affects the hair of the beard and moustache, and here it reaches its highest development. It is found also in the hairs of the pubic region and in the scalp hair. Raymond[2] says that he has found it on the labia majora in 40 per cent. of all women he has examined, and specially in fat women with intertrigo. He has found it also on scrotal hairs. It consists

[1] Amer. Journ. Med. Sci., July, 1878, p. 88.
[2] Ann. de derm. et de syph., 1891, ii., p. 568.

of one or more whitish or grayish, shiny, transparent nodular swellings occurring along the shaft of the hair. In people with red hair the color may be black. The number of nodes that may be present is from one to five, and their size will vary with the diameter of the hair. The nodes, according to S. Kohn,[1] occur usually in the upper third of the hair. These nodes give to the hair an appearance not unlike that produced by the presence of the nits of pediculi. The hair is exceedingly brittle and fractures upon slight traction or spontaneously, the fracture taking place through a node and the hair fibers separating like the hairs of a brush. When many hairs in the beard are thus broken, their frayed-out ends make the beard look as if it were singed. Sometimes the hair fibers splinter about the node, but the two ends do not separate, and this gives an appearance like as if two small paint brushes were pushed together. Sometimes the hair presents an irregular contour and looks as if frayed along its entire length. While the fracture is usually transverse, if there should be an excessive amount of medulla present in the node it may be longitudinal. The hairs themselves are usually firmly fixed in the follicles.

FIG. 12.

Trichorrhexis nodosa. (MICHELSON.)

ETIOLOGY. The cause of the disease is probably a micro-organism, as micro-organisms have been found in relation to the disease by Hodara, Essen, and others. E. Spiegler[2] has succeeded in cultivating a bacillus and in reproducing the disease by inoculation with its culture. Anderson[3] has reported a case of hereditary trichorrhexis nodosa, the disease in his patient being congenital or nearly so.

[1] Vierteljahr. f. Derm. u. Syph., 1881, viii., 581.
[2] Arch. f. Dermat. u. Syph., 1897, xli., 67.
[3] Lancet, 1883, ii., 140.

By some it is regarded as purely mechanical, due to the patient's habit of handling the beard.

PATHOLOGY. The microscopical examination of the affected hairs shows that in the early stage of development of the disease there are simply a spindle-formed thickening in the continuity of the shaft of the hair and a swelling of the medulla, while the cuticle is still intact. Later the cuticle becomes cleft, and the cleavage extends on all sides of the node till the brush-like appearance is produced by spreading of the separate fibers. At the same time with the cleaving of the cuticle the medulla undergoes degenerative changes. There is either no marked change in the appearance of the hair-root or it is slightly atrophied. Air-globules are only very occasionally found in or about the nodes. Spiegler has found his bacillus in the hair beneath the epidermis and in the root-sheath.

TREATMENT. The treatment of the disease is very unsatisfactory. Continued shaving probably offers the best hopes. All sorts of applications have been made to the affected parts, generally of a stimulating character, particularly various forms of mercurials, but without curative effect. Gamberini, in his work on the hair, recommends either bathing the part with a lotion composed as follows:

℞	Potass. subcarb.,	ʒiij;	8		
	Alcohol. dil.,	ad ʒv;	ad 100		M.

or inunctions of tannic acid or oil of cade.

Schwimmer advises that an ointment of

℞	Zinci oxid.,	gr. vij;	1	5	
	Sulphur. loti,	gr. xv;	3		
	Ung. simp.,	ʒijss;	30		M.

be rubbed in in the morning and evening.

Besnier finds it useful to pluck the diseased hairs and to apply to the newly formed hairs tincture of cantharides, pure or diluted. Sabouraud advises using daily

℞	Hydrarg. bichlor.,	gr. iv;		20	
	Ac. tartaric.,	gr. viij;		40	
	Resorcin.,	gr. xv–xxx;	1–2		
	Alcohol.,				
	Æther.,	āā ʒjss;	āā 50		M.

A two per cent. solution or ointment of pyrogallol or a three per cent. carbolic acid ointment has been advised by others.

Allied to trichorrhexis nodosa we have MONILETHRIX, or ringed hairs, in which the hair shaft is marked by alternate swellings and constrictions, the latter being colorless. The hairs are liable to fracture through the constricted portion, in this way differing from trichorrhexis nodosa. The disease has been met with on the legs. It is probably due to a tropho-neurosis. It begins in the hair follicle.

Atrophia Unguium. Atrophy of the nails occurs as a symptom of very many diseases of the skin, such as lichen ruber acuminatus, pityriasis rubra, psoriasis, and syphilis; or it may be caused by the invasion of the nail-bed by parasites, as in favus and ringworm. It may also occur like defluvium capillorum as a sequence to some grave acute illness, such as typhoid fever or scarlatina, or some cachexia, such as diabetes. The nails may be congenitally absent or deficient, or become so without apparent cause. Injuries and certain chemicals will cause the nails to atrophy and fall. Atrophy is shown by white spots in the nails, by loss of lustre, by transverse white lines, by longitudinal or transverse furrows, by a worm-eaten appearance, or by a general thinning and breaking away of the nail-plate.

TREATMENT. The treatment is most unsatisfactory. If the cause can be discovered and removed, the nails will recover. In many cases all we can do is to protect the nail by rubber cots or by the use of wax or other protective. Ointments of lead, zinc, or mercury may be rubbed in. The persistent use of sulphur ointment, combined with the administration of nerve tonics, will prove beneficial in those cases apparently dependent upon nerve disturbance.

Atrophoderma, or **Atrophia Cutis.** Atrophy of the skin may be quantitative or qualitative; idiopathic or sympto-

matic; diffused or circumscribed. Crocker[1] gives this useful table:

Atrophoderma Idiopathicum.	Diffusum	Juvenilis	Pigmentosum.
			Albidum.
		Senilis	Quantitativum.
			Qualitativum.
	Circumscriptum (striæ et maculæ)		Traumaticum.
			Non-traumaticum.
Atrophoderma Symptomaticum.	Neuriticum (glossy skin)		Traumaticum.
			Non-traumaticum.
	Morborum cutis.		Scleroderma.
			Seborrhœa.
			Lupus.
			Syphilis.
			Favus, etc.

The symptomatic atrophies will be spoken of under their proper headings. The other forms of atrophy will be considered here.

Atrophoderma Pigmentosum. Synonyms: Xeroderma pigmentosum (Kaposi); Angioma pigmentosum et atrophicum (Taylor); Dermatosis Kaposi (Vidal); Liodermia essentialis cum melanosi et telangiectasia (Neisser); Melanosis lenticularis progressiva (Pick); Lentigo maligna (Piffard); Epitheliomatose pigmentaire (Besnier). This is a very rare disease of the skin, first described by Kaposi in 1870 under the name of xeroderma, to which he subsequently added the adjective pigmentosum. It is a congenital disease; almost all cases begin before the second year of life.

Symptoms. It affects the parts most exposed to the air; the face, neck, chest, and back down to the level of the clavicles, or even the third rib, the backs of the hands, forearms, and upper arms. The hands, face, and neck are most markedly diseased, while a few cases have occurred upon the legs and back of the feet. It begins with erythematous patches, like those produced by sunburn. After a time brown or black freckle-like spots form upon the erythematous ones. They are from pinhead to bean size and round or irregularly shaped. Small

[1] Diseases of the Skin. Lond. and Phila., 1888.

red spots appear among the pigmented lesions, which Taylor thinks are their forerunners. The pigmented spots in time give place to white atrophic ones, and the skin becomes too small for the underlying parts, so that it appears drawn and in some places bound down. A fully developed case presents a vast number of lentiginous spots interspersed with white atrophic spots and

FIG. 13.

Atrophoderma pigmentosum. (After CROCKER.)

stellate and striated telangiectases. After a time, on account of the atrophy of the skin, we find ectropion, thinned alæ nasi, and contracted nasal and oral orifices. There may be white atrophic spots on the mucous membrane of the lips. Conjunctivitis generally supervenes upon the ectropion, and discharge from the eyes sets up ulcerations which in their turn give rise to other ulcerations. Warty growths at last appear, and these are prone to take on malignant action and be converted into epithe-

liomas, and the patient dies at an early age from marasmus. At first, however, there is no disturbance of the health.

ETIOLOGY. The etiology of the disease is obscure. It is supposed by some to have its starting point in irritation of the skin by the sun or other irritant. Many of the cases begin in the summer. It is supposed by others to be a tropho-neurosis. It is found in both sexes, but is peculiar in affecting several members of the same family and of the same sex, and in occurring in the first or second year of life. It is not hereditary. In a few of the cases there was a history of cancer in the family.

DIAGNOSIS. The disease is to be differentiated from *scleroderma* by the peculiarity of its being limited to exposed parts, by lacking stony hardness, by occurring early in life, and by the general picture of pigmented and atrophic spots and telangiectases being intermingled. It differs from *urticaria pigmentosa* in not itching, in not occurring upon the trunk, in the absence of wheals, and in the presence of telangiectases and warty or epitheliomatous growths.

TREATMENT. Nothing has yet been found to stop the progress of the disease. The conjunctivitis is to be cared for, the ulcerations on the face healed as rapidly as possible, and the warty growths and epitheliomatous nodules destroyed at an early date so as to prevent the development of epitheliomatous or carcinomatous ulcers. A saturated solution of boric acid will do much for the eyes; the ulcers may be treated with iodoform or aristol powder or a dilute ammoniate of mercury ointment; while the warty growths should be scraped off with a curette.

PROGNOSIS. The disease is fatal, death from marasmus taking place in from ten to twenty years.

Atrophoderma Albidum is the name used by Crocker for a second form of the xeroderma pigmentosum of Kaposi, which is described by the latter as beginning in childhood, affecting most frequently the lower extremities and less often the forearms and hands, and characterized by thinness of the skin, which in some places is stretched and

cannot readily be taken up into folds. The color of the skin is pale and white, with a delicate rosy shimmer in places, and here and there its epidermis peels off in asbestos-like lamellæ. The treatment is simply protective.

Atrophoderma Idiopathica Diffusa. Diffused idiopathic atrophy of the skin is a very rare affection. It may be congenital or acquired, general or partial. The subcutaneous tissue disappears, so that the skin lies close to the underlying parts. It is thin, pale, stretched or wrinkled, easily movable over underlying parts, and allows the blood vessels to show through. In some cases thick scaly plates form, while in others these are wanting and there is only slight scaling. The elasticity of the skin is lost, so that if it is pinched up into folds these slowly flatten out. In some cases the skin seems too small for the body, which, on the face, gives rise to ectropion and other deformities. The sensibility of the skin may not be diminished. The patients are susceptible to cold. Ulcers are prone to form upon slight injuries. The hair is destroyed. The disease is probably a tropho-neurosis. One case was ascribed to exposure to cold.[1]

Hardaway[2] reported two cases occurring in a brother and sister; and Ohmann-Dumesnil[3] has met with a case of atrophy of the skin and muscles of the right arm apparently following an injury to the radial nerve by means of a burn on the hand.

One variety of diffused idiopathic atrophy of the skin is that called *hemiatrophia facialis progressiva*, in which only one-half of the face is affected, and the skin becomes thinned and shrunken so that it lies close to the bones.

Under this heading may also be placed the *glossy skin* of Paget, Weir Mitchell, and others. It commonly affects the fingers, less often the extremities, and follows upon disease or injury of nerves. It occurs also in scleroderma. The fingers become dry, red, or mottled, look glazed or as if varnished, and are shrunken. The natural lines of the

[1] Pospelow: Ann. de derm. et de syph., 1886, vii., 505.
[2] Trans. Amer. Dermat. Assoc., 1884.
[3] Alienist and Neurologist, July, 1890.

skin disappear and the nails fall off. If parts covered with hair are affected, the hair falls. Its tendency is to spontaneous recovery.

Atrophoderma Senilis is a true atrophy of the skin that takes place in consequence of advancing years. Other degenerative changes also are present, as a rule. It may be partial or general. The skin looks wrinkled; it is thrown into folds, is dry and sometimes scaly, and is often of darker color than normal. By pinching up the skin the thinness of it is readily appreciated. With the atrophy of the skin there are likewise loss of the subcutaneous fat, pruritus, and verruca senilis. Treatment is out of the question.

Atrophoderma Striatum et Maculatum. By this is meant circumscribed atrophic streaks or spots. They may be idiopathic or symptomatic. The idiopathic form is far more rare than the symptomatic form.

SYMPTOMS. The *idiopathic streaks* are met with most often about the thighs, buttocks, and lower anterior part of the abdomen. They are one or two lines wide, slightly curved, and from one to several inches long. There are usually several present, and then they are arranged parallel to one another and run in an oblique direction. The *macules* are isolated, from pinhead to finger-nail size or larger, occur most frequently on the extremities and lower part of the trunk, but may occur as high up as the neck, and are less common than the streaks. Both forms of lesion are depressed below the surface of the skin, and are of a pearly or bluish-white color and have a glistening, scar-like appearance. They are not primary atrophies, but succeed to an erythematous hypertrophic lesion, in this greatly resembling morphœa. They give rise to no inconvenience, and are accidentally discovered. They usually are permanent, though they may become less pronounced in time.

ETIOLOGY. The etiology is obscure. By many it is regarded as a tropho-neurosis. Shephard[1] and Duckworth[2] have reported cases of atrophic spots and lines following fevers.

[1] Trans. Amer. Dermat. Assoc., 1890, p. 23.
[2] Brit. Journ. Dermat., 1893, v., p. 357.

Symptomatic lines and *macules* are very common, and are caused by the stretching or rupture of the more superficial bundles of white and elastic fibrous tissues of the skin. If the fibres are ruptured, the striæ will be most pronounced, and there will be little left of the skin but the epidermis and a thin fibrous membrane.[1] This form of atrophy of the skin is seen upon the abdomen of pregnant women (*lineæ albicantes*) and on the breasts of nursing women. In fact, anything that greatly distends the skin may give rise to them, such as abdominal ascites, obesity, ovarian or other tumors.

TREATMENT. The treatment of these cases is purely expectant. Both the idiopathic and the symptomatic atrophies may grow less pronounced in time.

Aussatz. See Leprosy.

Autographism. See Urticaria factitia.

Baelzer's Disease of the lip is a chronic affection of the mucous glands of the lip marked by an indolent swelling and infiltration of the periglandular tissue, and a slow ulceration from above downward. It ceases only with the destruction of the affected gland. The neighboring lymphatic glands are not implicated. A superficial catarrhal inflammation of the mucous membrane of the lips frequently accompanies the process. There is no general systemic disturbance. It has no relation either to syphilis, tuberculosis, or cancer. It is regarded as a local infection. It is readily cured by the application of tincture of iodine, which at first is used every other day, and later every day.

Baker's Itch. See Eczema.

Baldness. See Alopecia.

Barbadoes Leg. See Elephantiasis.

Barber's Itch. See Trichophytosis barbæ.

Birth-mark. See Nævus.

Biskra Bouton, or **Biskrabeule.** See Aleppo boil.

[1] Taylor, R. W.: New York Med. Journ., 1886, xliii., p. 1.

Blackheads. See Comedo.

Blasenausschlag. See Pemphigus.

Blutfleckenkrankheit. See Purpura.

Blutgeschwür, or Blutschwär. See Furunculus.

Blutschweiss. See Hæmatidrosis.

Boil. See Furunculus.

Bouton d'Amboine. See Yaws.

Brandrose is a phlegmonous erysipelas.

Bricklayer's Itch. See Eczema.

Bromidrosis. Synonym: Osmidrosis. This word means stinking sweat, which, though not elegant, is expressive. It most often affects the feet, and then is associated with hyperidrosis. It may be general, as in the negro race. The odor is not necessarily repulsive, a few cases having been reported in which it was that of violets. The axillæ are, next to the feet, the most common site of the trouble. The odors of different fevers and cachexiæ are usually classed under this heading, though they do not properly belong here.

Strictly speaking, bromidrosis should include only those rare cases in which the sweat, when secreted, has a distinctive odor. Usually the odor in bromidrosis is not in the sweat, but in the products of decomposition, the fatty acids and the like. When the feet are the parts affected they will be found to be of a pinkish color about the soles and between the toes, or the skin will look sodden and grayish. When the hyperidrosis is well marked, and it commonly is, the feet may be so tender as to interfere with locomotion. The stench from a pronounced case is such that it is almost impossible to stay near the subject of the disease.

Etiology. The cause of general bromidrosis is either inherent in the race or unknown. Most of the cases, apart from the racial ones, have been in hysterical subjects. In the usual form of the disease it is due to decomposition of

the sweat in the stockings, shoes, or clothing of the individual. When the part is uncovered and kept clean there is no odor. Thin has described a parasite, that he has named bacterium fœtidum, as the cause of the disease. It has been supposed that this bacterium can live only in an alkaline medium. The sweat is acid, and, therefore, on most feet it does not grow, but when hyperidrosis macerates the epidermis and allows of the escape of serum the acidity of the sweat is neutralized and the bacterium flourishes.

TREATMENT. The treatment of the general cases is of no effect. In the local cases the hyperidrosis is to be overcome, as will be described in its proper place. The special treatment directed to the cure of the odor of the feet is to wash them with soap and water two or three times a day, to put on a clean pair of stockings every morning, to ventilate the shoes thoroughly, and to dust the feet, between the toes, the stockings, and the inside of the shoes with finely powdered boric acid. Thin recommends the wearing of cork inside soles, which are to be soaked in a saturated solution of boric acid and dried before using. Another useful powder is:

℞ Ac. salicylici, ʒiss-iij; 5-10
Pulv. alum. exsic. *vel.* } ad ʒiij; ad 100 M.
Pulv. lycopodii, }

to be applied in the same way, twice a day. This will cause the skin to exfoliate, when the treatment may be stopped.

W. Osler[1] reports one case of general bromidrosis cured by the administration of alkalies.

Bucnemia Tropica. See Elephantiasis.

Bulpiss[2] is a disease that occurs in Nicaragua, affecting every tribe, both sexes, and all ages, though rare in early infancy. It begins on the feet and hands, and spreads gradually, or upon the knees, or abdomen, or neck and face. Two kinds are described. In the *white* bulpiss there are

[1] Montreal Med. Journ., 1896-7, xxv., 890.
[2] O. Lerch: New Orleans Med. and Surg. Journ., 1894-5, xxii., 793.

crops of minute reddish papules, which on disappearing leave discolored spots. After a time the pigmentation fades away and leaves a dirty white, round or oval patch, with slightly elevated and partly discolored broad margins. In *black* bulpiss the patches are grayish black, and the skin is dry and shrivelled. Both kinds itch at night. It is contagious and probably parasitic. It resembles if it is not identical with caraté.

Bunion. According to P. Syms,[1] a bunion is always secondary to an outward displacement of the first phalanx of the great toe due to ill-fitting shoes. As a result we have a periostitis with hyperplasia, and finally exostosis of the metatarsal bones. The pressure between the exostosis and the shoe gives rise to an inflamed bursa, the bunion. Surgical interference and properly constructed shoes are the only remedies.

Cacotrophia Folliculorum. See Keratosis pilaris.

Calculi, Cutaneous. See Milium.

Callositas. Synonyms: Callosity; Callus; Tylosis; Tyloma; Keratoma; (Fr.) Durillon. This is familiar to all as the callous skin of the hands met with in oarsmen, blacksmiths, and in those who follow other manual occupations, and is a hypertrophy of the epidermis consequent upon intermittent pressure of the skin against the underlying bone. Constant pressure will cause atrophy. The same thickening of the skin is found upon the soles also, due to going barefoot or wearing improperly fitting shoes. In fact, it may develop anywhere under proper conditions.

TREATMENT. No treatment is necessary for the acquired forms. Cessation from using the hands will be followed in course of time by the disappearance of the callus. To hasten its removal we may use maceration with rubber cloth continuously applied to the part, or a plaster of salicylic acid, or a solution of salicylic acid ten to twenty per cent. in ether or collodion. The action of these remedies will be aided by previously paring down the part with a sharp knife.

[1] New York Med. Journ., 1897, lxvi., 448.

Callus. See Callositas.

Calvez
Calvezza
Calvities } See Alopecia.

Cancer. See Carcinoma and Epithelioma.

Cancroide. See Epithelioma.

Canities. Synonyms: Trichonosis cana; Trichonosis discolor; Poliothrix; Poliosis; Trichonosis poliosis; Spilosis poliosis; Poliotes; Grayness of the hair; Whiteness of the hair; Blanching of the hair; Atrophy of the hair pigment.

Grayness or whiteness of the hair may be congenital or acquired; the latter is by far the most common. The whiteness is either partial or complete.

Congenital canities usually occurs in the form of tufts, sometimes in round patches, the more or less pure white hair showing conspicuously among the normal-colored mass. When the whiteness is general we have albinism, which is associated with a deficiency of pigment in the whole body. Cases of congenital canities are rare.

Acquired canities may be premature or senile. Most often grayness does not begin before the thirty-fifth or fortieth year. If it occurs before this age, it may be considered as premature; and when after this age as senile. Premature canities is by no means uncommon, many persons becoming gray between the twentieth and twenty-fifth year. The hair which first whitens is, as a rule, that of the temples; then follows, with more or less rapidity, that of the vertex and whole head. Sometimes the beard first turns gray, but usually it changes color after the hair of the scalp. The last hair to become gray is that of the axillæ and pubis. When the graying is due to some passing cause, as anxiety or some diseased state, the process may cease completely upon removal of the cause. Usually the whiteness is permanent. As a rule, there is no change in the color of the scalp, though in some cases gray tufts are found upon pale-yellow patches

of scalp. As in alopecia, so in canities, men are more frequently affected than women.

The hair in canities is usually unchanged except in color, but it may be drier and stiffer than normal. Canities may exist for years without alopecia.

The hair turns gray first at its root. The color at first is gray on account of the mixture of the normal color with the whiteness due to the absence of pigment. Gradually, the white tones gain the ascendant, and the whole hair is [illegible], becoming finally of a yellowish or snowy white-[illegible]. The [illegible] the hair is originally the more it is [illegible].

[illegible] of the hair from its normal [illegible] authenticated to [illegible] though it has been denied [illegible] the correctness [illegible].

[illegible] blanching of the [illegible] marked by alternate [illegible], and the next [illegible] is very rare and [illegible].

[illegible] under varying [illegible] hair that comes [illegible] reports a [illegible] the patient's [illegible] a growth of [illegible] mate, with [illegible] gray. Some-[illegible], becom-[illegible] the other [illegible] climates. [illegible] Albinos, [illegible] which [illegible] and many [illegible] change [illegible] with [illegible].

[illegible]

[illegible] The Hair in Health and Disease. London, 1877.

the production of pigment. Only this function of the papillæ seems to be interfered with, as the hair-forming function is in full activity, judging from the fact that the hair in many cases is in full vigor. In cases of sudden blanching of the hair the change of color is dependent upon the formation of air bubbles between the hair cells of the cortical substance, the presence of the air rendering the cortical substance opaque, so that the color of the pigment is obscured. There are various agents which act as active or exciting causes of canities. Age is one of the most prominent of these. Heredity exerts marked influence upon the blanching of the hair, most of the members of certain families turning gray at an early period of life. Neuralgia of the fifth nerve, dyspepsia of various forms, sudden fear or nervous shock (producing sudden blanching of the hair), profuse and frequent hemorrhage, excesses of all kinds, chronic debilitating diseases (as syphilis, malaria, and phthisis), local diseases or injuries to the scalp, as wounds, favus, repeated epilation, prolonged shaving, and the like, have been given by various writers as causes of canities. Schwimmer regards it as being principally a tropho-neurosis, and finds in the occurrence of grayness in the course of neuralgia a strong argument for his theory.

TREATMENT. We cannot restore the color to gray hairs. In some cases of canities occurring in the course of neuralgias, if we can cure the neuralgia, the color will gradually return to the hair.

Besnier and Doyon suggest the use of acetic acid as a promoter of pigmentation, as they have seen numerous instances of its use in alopecia areata followed by growth of hyper-pigmented hair.

All that can be done for canities is to restore artificially the color by means of hair dyes, and their use is to be deprecated. Happily the custom of dyeing the hair is falling out of fashion.

Caraté. This is an endemic, parasitic disease of the skin met with in the United States of Colombia and in other South American countries. It has an incubation

stage of about one month. It begins as an erythematous macular eruption, sometimes preceded by itching.

The macules cover themselves with fine scales; their centers gradually become violaceous, red, or blue. After from two to five years the macules become violet, black, yellow, or white in color. Upon the same subject may be found variously colored patches. After some years the greater part of the surface of the body may be affected, and the mucous membranes may be invaded. Itching is pronounced. The palms and soles become thickened. The flexures of the joints may be ulcerated and painful, and covered with small corns. The hair may fall from the patches on the body. The duration of the disease is indefinite.

It is due to a fungus that is found in the stagnant waters of gold mines and in the grains of certain cereals, and it is transmitted also by mosquito-bites.

It differs from pinta in its slower development, less contagiousness, and in the characters of its fungus.

The TREATMENT consists in the use of such remedies as mercurial ointment, tincture of iodine, and chrysarobin.

Carbuncle. Synonyms: Anthrax,[1] Carbunculus; (Ger.) Brandschwär.

A phlegmonous inflammation of the skin and subcutaneous tissue, attended with sloughing.

SYMPTOMS. The disease begins as an innocent-looking papule, which, however, is far more painful, both subjectively and objectively, than an ordinary papule would be. Within twenty-four hours it becomes larger, more painful, slightly raised and reddened, and is generally accompanied by a good deal of constitutional disturbance, such as chills, fever, and nervous irritation. All the symptoms increase in severity, the inflammation extends laterally and vertically, the swelling becomes darker in color, the pain more intense, throbbing, and lancinating, and the constitutional disturbance may be so severe that the patient is compelled to go to bed. Within ten days, or perhaps

[1] Anthrax, a term that is often applied to carbuncle, should be used rather for malignant pustule or the local manifestation of splenic fever.

longer, the swelling has reached its height. It may be two or three inches or more in width, with a brawny base that is more or less sharply defined, of irregular shape, firm to the touch, and with a wide area of œdematous skin about it. Now it begins to soften, not like a boil with a central point, but by the formation of a number of pea-sized purulent points, through which sanious pus exudes, giving to the surface a cribriform appearance. Sloughing takes place through the openings, that gradually enlarge, so that at last there results an irregular, deep, excavated ulcer with firm, sharply cut, everted edges. In very bad cases the whole mass may fall out at once. The ulcer gradually fills up, heals, and leaves a scar. With the discharge of the slough the patient gradually recovers his health; but in some cases, especially in persons already debilitated or in elderly people, the disease runs a fatal course, the patient dying of exhaustion or pyæmia, or the disease runs into a typhoid condition preceding death. Death may also result from acute sepsis, or from thrombosis or embolus, especially in carbuncles on the scalp. In some cases the resulting ulceration is very large, with a corresponding amount of general disturbance of the system. Dry gangrene may take place.

The disease is rare in children, and most common in middle and old age. Men suffer more often than women. The most frequent locations of the disease are the upper dorsal region, back, buttocks, and forearms, though it may occur anywhere. It is usually a single lesion. The duration of the whole process is six weeks or more.

ETIOLOGY. The causes of the disease are very much the same as those of boils. While carbuncle is most apt to occur in those who are not in good health, it does occur at times in apparently robust subjects. Diabetics are frequent subjects; gout and uræmia have been considered as predisposing causes. The frequent location of the disease about the shoulders and on the back of the neck suggests pressure as a determining cause. Micro-organisms are the exciting cause of the disease, the staphylococcus pyogenes aureus being constantly found in the tissues of a carbuncle.

PATHOLOGY. To Warren,[1] of Boston, we owe one of the most thorough studies of the pathology of carbuncle. He declares it to be a speading phlegmonous inflammation of the subcutaneous cellular tissue. The inflammatory cells cluster in and about the columnæ adiposæ and push out laterally from them, infiltrating the skin. They reach the surface by mounting up along the hair follicles and arrectores pilorum muscles.

DIAGNOSIS. Carbuncle differs from *furuncle* in being single; in its brawny base; in its greater painfulness and constitutional disturbance; in its flatter shape and larger size, and especially in its opening at many points and presenting a cribriform surface rather than a central core and a crater-shaped opening. Its circumscribed shape, its lancinating pain, and its multiple sieve-like openings distinguish it from *diffuse phlegmonous inflammation* of the skin. *Anthrax* becomes gangrenous earlier than carbuncle and its center sinks in instead of becoming elevated.

TREATMENT. As the disease is an exhausting one the patient's strength is to be supported from the start and his nutrition kept up by a generous diet. Fresh air by good ventilation must be secured. If the pain is excessive, opium or morphine is indicated, especially to procure sleep. Iron is a valuable remedy all the way through, and antipyretics should be administered if the fever is high. Alcohol should be given if suppuration is free, especially if there are any signs of exhaustion.

The best local treatment in mild cases is the use of carbolic acid, and this gives such good results as to leave little to be desired. The crucial incision formerly practised is now considered by many modern authorities as harmful, though it certainly gives relief for the time by removing tension. In like manner the old-time method of poulticing is condemned, though it, too, contributes to the comfort of the sufferer. For ordinary carbuncles the most efficient treatment is to inject them at several points with a five or ten per cent. solution of carbolic acid in olive oil or glycerin, by means of an ordinary hypodermic syringe. When there are already sloughing points it is well to push into

[1] Boston Med. and Surg Journ., 1881, civ., 5.

each of them a little absorbent cotton wound on the end of a wooden toothpick and dipped in carbolic acid either pure or in one to four solution. These procedures are painful for a moment. The mass must then be covered with lint soaked in a weak solution of carbolic acid. It is possible to abort some carbuncles by touching them with pure carbolic acid. E. O. Ashe[1] reports the cure of one case by the injection of antistreptococcic serum. Eade[2] says that it is possible to abort cases in the papular stage by continuous soaking with a solution of a mild antiseptic, such as boric or salicylic acid.

Canquoin's paste and a solution of chloride of zinc, 1 : 50, have been recommended for use in the same way as the carbolic acid.

Extensive carbuncles are to be treated on surgical principles by incision or erosion with a curette. The resulting raw surface, as well as that of ordinary carbuncles, is to be dressed antiseptically with iodoform, iodol, or aristol in powder.

Carcinoma. Epithelioma is the form of cancer that most frequently is met with in the skin. It will be described under its proper heading. Carcinoma of the scirrhous variety rarely attacks the skin, but when it does it may be primary or secondary. Most commonly it is secondary to the same disease of the breast or internal organs. It may follow extirpation of the primary deposit, and then is prone to begin in the scar. Two varieties are described, namely: Carcinoma lenticulare and Carcinoma tuberosum.

Carcinoma Lenticulare generally appears on the chest in the neighborhood of the breast and secondary to a mammary cancer or in the scar resulting from a previous operation for the removal of a cancer of the breast. It appears in the form of smooth, firm, glistening, dull, or brownish-red or pinkish nodules raised above the surface and discrete at first. In size the nodules vary from that of a pea to that of a bean. After a time the nodules run together and form a thick, indurated mass, which may involve so much of the chest as to interfere with breathing.

[1] Brit. Med. Journ., 1898, ii., 1427.
[2] Lancet, May 19, 1888.

This is the *cancer en cuirasse* of Velpeau. Now the neighboring lymphatic glands are involved and the arm of the same side becomes swollen and useless. In a short time the nodules and the mass break down and ulcerate, and the patient soon dies of exhaustion.

Carcinoma Tuberosum is still more rare. It may occur anywhere, but is most frequently seen upon the face and hands. It takes the form of disseminated, flat or elevated, round or oval tubercles or nodules, seated deeply in the skin and subcutaneous tissues. These are of a dull-red, violaceous or brownish-red color. They do not tend to run together, but they break down and ulcerate, and the patient dies just as in the lenticular variety. It usually appears in old people.

In both forms there may or may not be lancinating pains, or there may be simply itching. In both, metastasis may take place.

Carcinoma Melanodes is described by most authors as a third form of carcinoma, but Robinson, Crocker, and Brocq regard it as melanotic sarcoma. It is impossible to distinguish them clinically from sarcoma, which see.

DIAGNOSIS. The diagnosis of carcinoma is not difficult when one is aware that there is such a disease, and knows that in a given case there has been, or is, a carcinoma elsewhere. The mode of evolution of the lesions, the involvement of the lymphatic glands, and the lancinating pains, all point toward carcinoma as against a tubercular syphilide, lupus, or leprosy.

TREATMENT. The treatment of carcinoma of the skin is the same as that of other forms, and is quite as unsatisfactory.

Chair du poule. See Cutis anserina.

Chalazodermia. See Dermatolysis.

Chancre. See Syphilis, initial lesion of.

Chap. Usually a mild form of eczema or dermatitis, attended with superficial cracking of the epidermis. It is generally due to exposure to cold and affects exposed parts, as the backs of the hands and the lips. Thorough drying

of the hands after washing and keeping them covered from the air will prevent its occurrence on the hands. Rubbing into the skin cold cream from time to time during the day or at night, or the use of a drachm of glycerin in an ounce of rose-water, will prove curative. Avoiding wetting the lips, and making some greasy protecting application, such as camphor ice, will prevent the lips from being affected.

Charbon. See Carbuncle.

Cheilitis Glandularis Aposthematosa is a disease of the lips, usually the lower one. The lip becomes gradually swollen, firm, and rather hard to the touch, and its mobility is impaired. The mucous glands become swollen and can be felt as nodular masses. A turbid muco-purulent secretion is poured out at times, and the gland ducts are more or less dilated. No pain attends the disease, which is exceedingly obstinate to treatment. Black wash is recommended in its treatment, together with the occasional application of nitrate of silver.

Cheiro-pompholyx. See Pompholyx.

Chelis and **Cheloide.** See Keloid.

Chilblain. See Dermatitis congelationis.

Chloasma. Synonyms: (Fr.) Chloasme, Panne hépatique, Tache hépatique, Chaleur du foie, Masque; (Ger.) Pigmentflecken, Leberflecken; (Ital.) Macchie epatiche; (Eng.) Liver spot, Moth patch, Mask.

A pigmentary disease of the skin, characterized by the formation of yellowish, brownish, or blackish patches of various sizes and shapes.

Symptoms. In this disease the only alteration of the skin is in its color. The disease consists in a deposit of pigment in the rete mucosum, and occurs in the form of circumscribed or diffused patches of yellowish to black discoloration. When the color is black it is called *melasma*, or *melanoderma*. The size of the patches varies greatly from a small spot up to a general bronzing of the skin.

The disease may be primary or secondary, idiopathic or

symptomatic. The *idiopathic* forms are most often secondary to some irritation. Thus it occurs with or in consequence of irritants applied to the skin, such as blisters or even sinapisms; prolonged scratching on account of some pruriginous disease, such as prurigo, pruritus cutaneus, chronic urticaria, scabies or pediculosis; exposure to the sun's rays or high winds, or even to heat, as of the furnace in iron workers, and then on exposed parts. These all cause more or less hyperæmia of the skin, and besides the deposit of the pigment there is more or less discoloration from the changes taking place in the extravasated blood. Allied to these causes and acting in the same way is the discoloration of the skin of the legs met with about old varicose ulcers and sometimes without the ulcers when there are marked varicosities.

The *symptomatic* form may likewise be primary or secondary. It is primary in that most common form of all that is known as *Chloasma uterinum*, or the *mask*, a form of hyperpigmentation of the skin of the face that occurs during pregnancy, or with uterine or ovarian irritation, and that is not met with after the menopause. It usually takes the shape of a diffused brownish, light or dark discoloration of the forehead alone, or also about the mouth and cheeks. Usually it extends only across the forehead and down the temples, and is either a continuous or interrupted patch with sharply defined borders. Sometimes it is macular in character and occurs on the eyelids, lips, and chin. Under the same conditions there takes place a deepening of the color about the nipples and along the linea alba. The darkening of the color under the eyes of menstruating women is largely due to vascular congestion, and little, if at all, to chloasma. After a time in some women true chloasma does occur there.

Primary pigmentation also occurs in certain cachexiæ, such as Addison's disease, tubercular leprosy in Europeans, abdominal tuberculosis, cirrhosis of the liver, cancer of the stomach, malaria, diabetes, exophthalmic goitre, and multiple melanotic sarcoma. There is also an earthy look to the skin in secondary syphilis, as well as in congenital syphilis. Primary chloasma is also seen as the result of

the ingestion of arsenic. Argyria is not a chloasma, strictly speaking.

Secondary symptomatic chloasma is seen as the sequela of syphiloderma and of lichen ruber planus; these dermatoses disappearing to leave behind them, for a greater or less length of time, hyperpigmented spots. It may occur after other diseases of the skin, but is usually more fugitive. It is also seen in senile atrophy of the skin. There is hyperpigmentation about the patches of leucoderma and in scleroderma. There is also a pigmentary syphilide met with upon the neck in women.

ETIOLOGY. The cause of chloasma is undetermined in most cases. A late theory of the pigmentation following exposure to the sun is that it is due to the action of the chemical rays of the sun upon the constituents of the blood. We know also that in some cases of hyperpigmentation the color is due to changes taking place in the coloring matter of the extravasated blood. That there is a relation between chloasma uterinum and the uterus we know, because the chloasma usually clears away either after parturition, the cure of the uterine disorder, or the attainment of the menopause.

DIAGNOSIS. The diagnosis is usually easy. *Discolorations* caused by artificial means can be washed off. *Chromophytosis* is scaly and can be scraped off with the nail. *Chromidrosis* is very rare and can be washed off with chloroform or ether.

TREATMENT. The treatment of chloasma is very unsatisfactory. In many of the symptomatic cases removal of the cause will be followed by disappearance of the color. Our first duty is to try to find the cause and, if possible, remove it. While it is possible to remove the color, it is very prone to return. Glacial acetic acid touched on in spots will reduce the color and sometimes remove it. The same may be said of other acids, care being used not to cause too great destruction of the skin by the stronger ones. The bichloride of mercury in one to two per cent. solution may be used for the purpose, applied repeatedly or else kept on continuously for three or four hours. It is not always a safe procedure. Salicylic acid, ten to fifteen per cent. in

ointment, paste, or plaster, or in saturated solution in alcohol, may do well. Unna has recommended washing the part with alcohol and applying over night a mercurial plaster made with the ammoniate of mercury. The next day this is to be removed and the following ointment is to be applied:

℞ Bismuthi subnit., Kaolini, Vaselini, āā ℥jss; ℥vj ad ℥jss; āā 7|5 30| M.

Brocq advises a mercurial plaster during the night, bathing morning and evening with a three or five per cent. solution of bichloride of mercury, and wearing during the day oxide of zinc or bismuth ointment.

The peroxide of hydrogen will cause a temporary disappearance of the pigmentation. In all cases in which there is an underlying cause attention must be given first to it.

Prognosis. Many of the symptomatic pigmentations disappear when the patient recovers his health. It is not well to promise a certain disappearance of the patches, as some of them are permanent.

Chorionitis. See Scleroderma.

Chromidrosis. Synonyms: Ephidrosis tincta; Stearrhœa or Seborrhœa nigricans; Pityriasis nigricans; (Fr.) Cyanopathie cutanée, Melastearrhée.

This is a condition in which the sweat has an abnormal color. Usually it affects only limited regions, especially the lower eyelids. The color is most commonly blue or blue black. The subjects are most often hysterical women, and many of the cases are feigned.

Besides the lower eyelids the upper ones may be affected. Next in frequency the colored sweat forms on some other part of the face, but it may occur on any portion of the body. Besides the blue or black color, cases of yellow, green, brown, and even rose color have been reported. A few men have exhibited the phenomenon. Hoffmann[1] reports a case of blue sweat of the scrotum of a man

[1] Wien. med. Wochenschr., 1873, xxiii., 291.

seventy-two years old, and White[1] has met with a case of yellow sweat in a man twenty years old. R. W. Taylor saw one case of apparently blue sweat that occurred in a man taking iodide of potassium, and was due to a reaction between the starch of his shirt and the iodine contained in the sweat. Constipation and nervous derangements are often found in the cases. The chromidrosis has been noted to grow worse with increased constipation, and become better when that condition was removed; to be more pronounced at menstrual periods, and to break out suddenly under emotional excitement. The skin may present no appearance of change except the discoloration, or it may have an evident deposit upon it. In either case the color can be removed by wiping with a little oil, or scraped off partially with the finger-nail.

ETIOLOGY. The cause of the disease is obscure. It has been thought to be due to the presence of colorless indican in the sweat, which becomes blue by oxidation. This accounts for a few cases at least.

DIAGNOSIS. The diagnosis is easy because the discoloration can be readily removed by an oiled cloth, while that of chromophytosis does not so readily come off, and that of chloasma does not yield at all. Moreover, neither of these last two conditions exhibits a blue color.

TREATMENT. The disease requires stimulation in its treatment, and good results have been reported from the use of the following:[2]

℞	Ac. borici,	gr. x;	2	
	Ac. salicylici,	gr. xv;	3	
	Ungt. aquæ rosæ,	ad ℥j;	ad 100	M.

The *red sweat* that occurs in the axillæ more especially, and elsewhere occasionally, is not a true chromidrosis, but is due to the growth of bacteria (*micrococcus prodigiosus*) upon the hair, as may readily be demonstrated under the microscope. The bacteria are sometimes present so abundantly as to encrust the hair. The same bacteria grown on culture-media are colorless, and it is supposed that the

[1] Journ. Cutan. and Ven. Dis., 1884, ii., 293.
[2] Van Harlingen: Handbook of Skin Diseases.

action of the sweat upon them determines their color. At times not only are the hair and skin stained red, but also the underclothing is deeply dyed.

A mild parasiticide ointment or oil with the use of soap and water, or a simple borax solution, will cure the disease just as in chromidrosis.

Green sweat has been seen in workers in copper. *Yellow sweat* has been found associated with bacteria and without them.

Chromophytosis.[1] Synonyms: Pityriasis versicolor; Tinea versicolor; Chloasma; Dermatomycosis microsporina; Mycosis microsporina; (Ger.) Kleien Flechte; (Fr.) Pityriasis parasitaire.

A vegetable parasitic disease, characterized by brown or café-au-lait colored, variously shaped and sized patches that occur chiefly upon the trunk.

This disease is far more common than statistical tables show it to be, as it causes so little trouble that many people never think of applying for relief. It begins as a small yellowish point, which rapidly grows into a split-pea-sized lesion. Many new lesions appear and, these coalescing, patches form which may be so large as to occupy a great part of the chest or back. At first, when of small size, the patches are circular in shape, but as they grow larger they lose all definiteness of shape, though their edges are always sharply marked and sometimes raised. Annular patches sometimes form, and at other times there will be many more or less circular patches of sound skin in the midst of the diffused patch. The color is usually fawn or café-au-lait; it may be brown or even black. The latter is reported only from tropical countries. In warm weather and in those who sweat profusely it is no uncommon thing to see the eruption present a pinkish hue, due to hyperæmia of the skin. In negroes the patches are gray or chamois-skin-like in color. The edge of the patch may be somewhat raised, but the surface is not generally

[1] The name of chromophytosis was proposed for this disease by Dr. F. P. Foster, and has been well received in New York, as it quite accurately defines the disease and brings it in line with trichophytosis.

above that of the skin. It presents various appearances. At times it is smooth and feels greasy; at times it is dry and covered with fine branny scales; while at times it looks rough, and, viewed in the proper light, it presents an appearance resembling that of ichthyosis of mild grade. These appearances are dependent upon the amount of sweating, which, if profuse, will remove the scales, especially if the clothing rubs upon the skin. The greasy feel is imparted by the oily sebaceous matter, always marked in the region of the sternum, where chromophytosis most often is located. Whatever may be the apparent condition of the surface, scraping with the nail will remove a good part of the disease, showing that it is located in the upper layers of the epidermis. The patches are located chiefly upon the anterior surface of the chest and upon the abdomen. The back is also quite often affected, but not so markedly as the chest. In very extensive cases the arms and legs may show the disease, and a few cases have been reported as occurring upon the face. C. W. Allen has pointed out that the disease is very often found concealed under the pubic hair. The rule is that the uncovered parts of the body are spared, and exceptions to this are very rare. The disease is not symmetrical. The number of patches varies from a few to hundreds.

The only subjective symptom is itching, and this is often absent, and seldom so bad as to cause the patient to seek relief on that account. Patients desire to be treated on account of the deformity, not the discomfort, of the disease.

ETIOLOGY. The cause of the disease is the lodgement and growth in the corneous layer of the skin of a vegetable parasite, the *microsporon furfur*. Like all other parasites of its class, this one is incapable of growth on every skin. It flourishes especially upon the skin of one who sweats freely. That consumptives were thought to be especially prone to the disease is due to the fact that their chests are exposed to the physician more often than are those of any other class of patients and the patches discovered. The disease is contagious, but its contagion is of low grade, and it is not common for it to take place even in such intimate relations as obtain between husband

and wife. Adults from twenty to forty years of age are the most common subjects, though children may have the disease. According to Besnier and Doyon, the disease is never seen in very old people. It occurs in all countries, but most often in hot climates. It attacks all classes and conditions of men, and shows no particular discrimination in regard to sex. Its growth is interrupted by malarial paroxysms, and it peels off with the desquamation of scarlatina and measles.

PATHOLOGY. The *microsporon furfur* is one of the most readily demonstrated of parasites. Place a few scales upon the slide, add a drop or two of liquor potassæ, tease out the material a little, put on the cover-glass, and even with a low power the picture here represented will

FIG. 14.

Microsporon furfur. (After KAPOSI.)

be seen (Fig. 14). It consists of heaps of conidia, which are larger than those of ringworm, with any quantity of interlacing mycelia running between them. Free conidia are scattered about in the field. The fungus grows in the upper layers of the epidermis. It has been asserted that

there were two kinds of fungus, one brown and the other pale red, each of which produces its own colored eruption. In 1896 T. Spietschka succeeded in making a pure culture of the fungus, inoculating an individual with it, reproducing the disease and making pure cultures from it.

DIAGNOSIS. If one remembers the characteristic features of the disease, yellow or café-au-lait, scaly patches, that can be partly scraped away and are located chiefly upon the chest, little difficulty can arise in diagnosis. An appeal to the microscope will decide any doubtful question. *Chloasma* is not scaly, cannot be scraped off from the skin, and does not have spaces of normal colored skin in the midst of the patches. *Leucoderma* is an absence of pigment with a hyper-pigmentation about it that comes up to the white spot with a concave border and is not scaly. A fading *erythematous syphilide* occurs not in patches, but in isolated, round macules that are neither scaly nor itchy, that are usually most numerous over the abdomen and sides of the chest, and that are very often found as a disseminated eruption occurring upon the face as well as the trunk. *Erythrasma* is not so scaly and occurs only in or about the joints. Its parasite is much smaller than that of chromophytosis.

TREATMENT. Anything that will cause the removal of the upper layers of the epidermis will cure chromophytosis when present only in slight degree. But it is best for safety to use a parasiticide. One of the pleasantest ways of curing the disease is to have the patient scrub his skin thoroughly with soap and water, preferably soft-soap, and then dab on, twice a day, a saturated solution of hyposulphite of sodium. Sulphurous acid, pure or dilute, is a prompt remedy. Vleminckx's solution, one to three or six parts of water; bichloride of mercury, two or three grains to the ounce; sulphur ointment rubbed in thoroughly, and tincture of veratrum viride are efficacious. The danger of systemic poisoning by either the bichloride of mercury or the veratrum viride should deter us from using these remedies in extensive cases. Unna[1] recommends:

[1] Vierteljahr. f. Derm. u. Syph., 1880, vii., 166.

℞ Tinct. rhei aquosæ, } āā p. æ. M.
Glycerini, }

Brocq gives the following:

℞	Acid. salicylici,	2–3 parts.	
	Sulphur. præcip.,	10–15 "	
	Lanolini,	70 "	
	Vaselini,	18 "	M.

Chrysarobin, naphtol, boric acid, and resorcin all are good. If the disease is very limited, it can be surely and speedily destroyed by painting the spot with tincture of iodine.

There is only one point to be borne in mind in using any of these remedies, and that is, that they must be thoroughly used and continued for a time even after the last trace of the fungus seems to have been removed. If one spore is left behind, the disease is liable to return. Special care must be given to the cure of the disease in the pubic region. The underclothing must be boiled before it is used again. Relapses are common, as the patient's skin is susceptible to the lodgement of the fungus.

Clastothrix. See Trichorrhexis nodosa.

Clavus. Synonyms: (Fr.) Cor; (Ger.) Leichdorn, Hühnerauge; Corn.

Symptoms. Corns are hyperplasias of the corneous layers of the skin due to pressure, and differing from calluses in having a central core that grows down toward the corium. They occur usually upon the toes, either over prominent joints, where they form hard corns, or between the toes, where, on account of being kept moist, they form soft corns. They are usually conical in shape and slightly projecting. Unless pared down they become painful by being pressed into the cutis. They are sometimes spontaneously painful on the approach of wet weather on account of their being hygroscopic. They may suppurate. They may occur upon the palm; I have seen several cases in tennis players. The soles are sometimes affected with them, and then walking is rendered very painful.

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℞ Acid. salicylici,	2–3 parts.	
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Diagnosis.—See Trichomycosis nodosa.

Clavus. Synonyms.—(Fr.) Cor; (Ger.) Leichdorn, Hühneraugen; Corn.

Definition.—Corns are hyperplasias of the corneous layer of the skin due to pressure, and differing from calluses in having a central core that grows down toward the corium. They occur usually upon the toes, either over prominent joints, where they form hard corns, or between the toes, where, on account of being kept moist, they form soft corns. They are usually conical in shape and slightly projecting. Unless pared down they become painful by being pressed into the cutis. They are sometimes spontaneously painful on the approach of wet weather on account of their being hygroscopic. They may suppurate. [illegible] may occur upon the palm; I have seen several in tennis players. The soles are sometimes affected [illegible] them, and then walking is rendered very painful.

Treatment. The best treatment for corns is to wear well-fitting boots and shoes, which must be neither too large nor too small. Pointed-toed shoes are especially apt to cause corns. The corn may be removed by the use of a salicylic acid plaster, or by Vigier's preparation, now sold in all the shops under the name of Hebra's Corn Remedy, which is composed of—

℞.	Ac. salicylici,	gr. xx;	1	5
	Ex. cannabis indicæ,	gr. x;		75
	Alcoholis,	♏ xx;	1	5
	Ætheris,	♏ lxxx;	5	
	Collodion flex.,	ad ℥ss;	15	M.

which is to be painted on three times a day for a week; then the feet are to be soaked in hot water, and the corn picked out. Corns may also be cut out, but the operation is at times dangerous, especially in old people. Resorcin plaster of ten per cent. strength worn for some days will remove corns. Crocker recommends for soft corns careful daily ablution with soap and water, painting on them spirits of camphor at night, and wearing wool between the toes during the day. The ointment of the nitrate of mercury is commended for soft corns. But unless well-made shoes are worn the corns will be sure to return. Corns on the hands may be removed with salicylic acid or scraped out with the dermal curette.

Clavus Syphiliticus. Under this title Lewin[1] describes certain lesions that he regards as being syphilitic. They are horny elevated growths that occur upon the hands and feet, and are sometimes surmounted by a delicate scaly crown, and sometimes covered with scales. They are from pinhead to lentil sized, circular, oval or oblong in shape; flat or concave on top, but never convex, and appear as if wedged into the skin. At first they are pale red and soft, but later they become yellowish horn-color and hard. They are usually on the palms of the hands, but may be on the soles of the feet, as well as upon all surfaces of the fingers and toes. There is no pain caused

[1] Arch. f. Dermat. u. Syph., 1893, xxv., 3.

over its mouth. The black color he believes to be analogous to the coloration of horns in cattle. He calls attention to the fact that comedones are more frequent in chlorotic girls than in coal-heavers.

It is quite certain that many cases of comedones are directly due to dirt or other foreign matters stopping up the follicles. This is supposed to be especially the case

FIG. 15

Demodex folliculorum. (After KÜCHENMEISTER.)

in children. Colcott Fox[1] says that in them the comedones are found most often in the spring-time and disappear in the winter. The youngest case in a child is one at twelve months.[2]

PATHOLOGY. The pathology of the affection is the same as that of acne without the evidence of inflammation. We find many varieties of micro-organisms in comedones.

[1] Lancet, 1888, i., 665. [2] Crocker: Lancet, 1884, i., 704.

The *demodex folliculorum*, a harmless parasite, is very often found in the plugs of sebaceous matter. This is long and worm-like, with a head, a thorax with four pairs of short, conical, three-jointed feet, with minute claw-like extremities, and a long, tail-like abdomen, which tapers off into a blunt and rounded point. (Fig. 15.)

Von During[1] has endeavored to show that the double comedo is always an acquired formation, and is the result of a destructive process between the ducts of two neighboring glands, so that the two ducts become one, and that the destructive process has affected only one gland, while the other one is still active enough to produce the comedo plug.

DIAGNOSIS. There is little difficulty in recognizing the disorder. *Powder grains* in the skin are under the skin and cannot be squeezed out.

TREATMENT. The same constitutional conditions being met with in comedones as in acne, we need not repeat here what is said there in regard to their general treatment.

FIG. 16.

Piffard's comedo-extractors.

The local treatment consists in pressing out the comedones and stimulating the skin to a more healthy action. There is little use in doing the first without the second, as the comedo would be sure to re-form. The comedones come out most readily after the free use of soap and warm water. Then they may be pressed out between the thumb-nails, or by means of an old watch-key, whose sharp edges have been worn down; or by means of either of the comedo-pressers of Piffard (Fig. 16) or the comedo-scoop of Fox (Fig. 17). With some practice they may be re-

[1] Monatshefte f. prakt. Dermat., 1888, vii., 401.

by them. There may be some itching. The lesions are met with in both sexes, and occur early in the disease, and often symmetrically.

Cnidosis. See Urticaria.

Cold Sore. See Herpes facialis.

Colloid Degeneration of the Skin. Synonyms: Colloid milium; (Ger.) Hyalom der Haut; (Fr.) Hyalome cutané.

SYMPTOMS. This is a very rare disease of the skin that occurs most often on the upper part of the face in the form of disseminated or grouped, discrete, transparent, shining, rounded, lemon-yellow elevations of the skin. Though they look as though they were vesicles, they do not contain fluid, and when pricked give exit to only a small amount of gelatinous substance and a drop or two of blood. They are resistant to the touch. The course of the disease is slow. It is capable of spontaneous disappearance by absorption or inflammation, leaving an ill-defined mark on the skin. It affects both sexes. The youngest patient so far reported was fifteen years old. It usually occurs in adult life. There are no subjective symptoms, and the general health is good.

DIAGNOSIS. It differs from *xanthoma* in its transparency and in the shining appearance and lemon-yellow color of the lesions. In xanthoma the lesions are soft and of a dull yellow. In *hydrocystoma* the lesions are more crystalline in appearance, and when pricked a drop of pure watery fluid escapes from them. In *adenoma sebaceum* the lesions [illegible] nodular in places.

[illegible] removing them by the curette

[illegible], Acne follicularis;
[illegible]; (Ger.) Mitesser,
[illegible]ckheads.
[illegible]ted sebaceous matter
[illegible]hose mouth is closed
[illegible] of extraneous matter,

and appears as a pin-point- to a pinhead-sized, slightly elevated, conical papule in the skin.

SYMPTOMS. Comedones are met with most often upon the face, ears, back, and shoulders, and occasionally, but much more rarely, on other parts of the body. Wherever met with they present the characteristics indicated in the definition just given. They are unaccompanied by inflammatory symptoms. Just as soon as inflammation is caused by their presence they are converted into acne lesions—a change that they very commonly undergo. Usually they are scattered about irregularly; sometimes they are grouped in certain regions. They are single lesions in the vast majority of cases, and being pressed between the thumb-nails they are readily expressed in the form either of an ovoid mass or more commonly as a filiform or worm-like mass that may be a half-inch or more in length, and has a black head that obtains for them the popular names of "fleshworms" and "blackheads." Very exceptionally they are double, lateral pressure squeezing out a filiform mass with a black head at both ends, if such an expression is allowable. There may be but few, or there may be hundreds of them, so that the face looks as if sown with grains of gunpowder. The largest are found in the ears and on the back. They give rise to no subjective symptoms. Seborrhœa oleosa is frequently a marked complication.

In children they are more apt to be grouped, and, according to Crocker, to appear on the forehead and occiput of boys, the temples in girls, and the cheeks in infants. The scalp, too, is in children the seat of the disease. Acne may follow them.

ETIOLOGY. All that has been said as to the causes of acne applies with equal force to comedones, and need not be repeated here. We would only add that Unna[1] does not accept the commonly received doctrine that the black head and the clogging of the follicle are largely due to extraneous matter, but teaches that they are due to the corneous layer of the skin being abnormally firm and preventing the escape of the follicle contents by growing

[1] Virchow's Archiv, 1880, lxxxii., 175.

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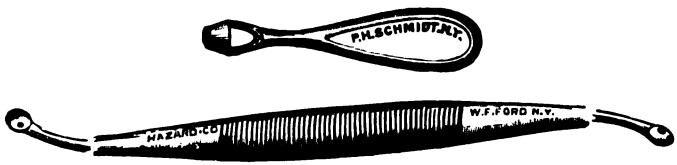
DIAGNOSIS. There is little difficulty in recognizing the disorder. *Powder grains* in the skin are under the skin and cannot be squeezed out.

TREATMENT. The same constitutional conditions being met with in comedones as in acne, we need not repeat here what is said there in regard to their general treatment.

FIG. 16.



Piffard's comedo-extractors.

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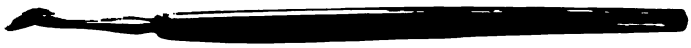
[1] Monatshefte f. prakt. Dermat., 1888, vii., 401.

moved by pressing the back of a small dermal curette against one side of the follicle mouth and making a quick turn of the end about them. Violent attempts at removal should not be made, as they may cause inflammation on account of too much irritation. If the comedo does not come out readily, wait until another time.

Fig. 17.



[illegible] with green or soft soap and water are excellent [illegible] remedy, care being taken not to set up [illegible] reaction. Hardaway recommends:

℞ [illegible] ℥ss ad 16
[illegible] ℥j 100 M.

[illegible] a dose of compound tincture every [illegible] as sulphur preparations as [illegible] objectionable. Although [illegible] of bone acid, zinc, or zinc [illegible] and [illegible] sulphur preparations seem to [illegible] the trouble [illegible] ammoniuret in favor of [illegible] mercuric chloride is the daily washing of [illegible] soap and water combined with massage.

See Varicella and Syphilis.

See Dermatitis herpetiformis.

See Chloasma.

Cornu cutaneum. Synonyms: Fr. Corne cutanée; Ger. Hauthorn; Cutaneous horn.

[illegible] disease of the skin, in which there grows [illegible] resembling, often in a most striking [illegible]. Horns vary greatly as to size.

They may attain the length of a foot and a diameter of fourteen inches at the base, and are usually single, but may be multiple. They may be straight, but usually are bent or twisted; they may be laminated, striated, or fibrillated; they may be yellowish, dirty gray, green, brown, or black; they are solid and hard, but not smooth and shining like animals' horns often are; and they have rounded or truncated ends. They are not painful unless pressed on. When torn or knocked off they expose a raw and bleeding surface at the base. Sometimes they fall spontaneously or as the result of some inflammatory process. Usually they re-form. Most of them occur upon the head, nose, face, or scalp. They may occur elsewhere, as upon the extremities or male genitals. Their bases may become the sites of epithelioma.

There is little known about their ETIOLOGY. They may occur at any age and in either sex. They seem to be warty growths that have undergone corneous transformation.

TREATMENT. The treatment consists in tearing them off, under an anæsthetic if large, curetting the base, and applying a caustic agent, such as a chloride of zinc paste or pyrogallic acid.

Couperose. See Rosacea.

Craw-craw is a disease of uncertain nature, met with in the tropics, specially on the west coast of Africa. It may be papular, vesicular, or pustular, the lesions being disseminated or grouped. Itching accompanies the lesions, and crusts form from the scratching. Ulceration sometimes takes place. Both whites and negroes are attacked, but chiefly the latter. Several kinds of parasites have been found in connection with the disease, specially a species of filaria.

The TREATMENT consists in removal of the crusts and erasion of the soft tissues beneath, as well as of all other lesions, and the application of an antiparasitic.

Crusta Lactea. See Eczema capitis.

Cutis Anserina, or Goose-flesh, is that condition of the

skin in which, on account of the action of cold causing a contraction of the arrectores pilorum muscles and elevation of the hair follicles, it feels rough and looks as if studded over with minute papules. It is a fugitive affair, therein differing from keratosis pilaris, which, though resembling it, is constant.

Cutis Pendula. See Dermatolysis.

Cutis Tensa Chronica. See Scleroderma.

Cutis Unctuosa. See Seborrhœa.

Cysticercus Cellulosæ Cutis. At times the larvæ of the tapeworm become lodged in the subcutaneous tissues and produce movable, painless, round or oval, pea- or cherry-sized tumors, with the skin raised over them. They are smooth, firm, and elastic. The larger ones may feel like wens. After about eight months (Cobbold) the animals die, and the tumors shrivel up and become hard nodules, or they may be absorbed. They simulate gummas, lipomas, sarcomas, carcinomas, and sebaceous cysts. In a doubtful case excision or puncture of one of the tumors will show under the microscope either one of the larvæ curled up in its shell, as it were, or the hooklets in the fluid that escapes.

Dandriff or Dandruff. See Dermatitis seborrhoica.

Dartre Farineuse, Furfuracée, or Volante. Old terms for Pityriasis and Eczema.

Darte Rongeante. See Lupus vulgaris.

Dartrous Diathesis. This term, though still used by French writers, is of very indefinite meaning. Dunglison defines it as "a peculiar state of health, which renders its subject liable to general eruptions of different forms, which are always met with in the young, are symmetrical and controlled by arsenic." It is supposed to be the underlying cause of eczema, herpes, seborrhœa, psoriasis, and not a few other diseases.

Defluvium Capillorum. See Alopecia.

Defœdatio Unguium. See Nails, degeneration of.

Delhi Boil. See Aleppo boil.

Dermatalgia. Synonyms: (Fr.) Dermalgie; (Ger.) Hautschmerz, Hautnervenschmerz; Neuralgia or rheumatism of the skin.

By this term is meant spontaneous pain in the skin, without any appreciable alteration of the same. The pain is variously described by patients as boring, pricking, or burning; or numbness or coldness may be complained of. It is constant or intermittent in character and sometimes so severe as to be agonizing. It is generally sharply located in a certain region, but it may be general. The hairy parts are those most often affected, as the scalp. The legs and back, and palms and soles are also not infrequently involved, as may be any part. Hyperæsthesia or anæsthesia may be present at the same time. Deep pressure may or may not relieve it. It disappears of itself after weeks or months.

ETIOLOGY. It is a neurosis that may be idiopathic or symptomatic. The idiopathic form is rare, and its etiology obscure. The symptomatic form occurs in dyspepsia, locomotor ataxia, rheumatism, syphilis, malaria, diabetes, hysteria, chlorosis, and after zoster. According to Hyde, it may be a sign of the approaching menopause. The majority of its subjects are women.

DIAGNOSIS. Dermatalgia differs from *neuralgia* in being more superficial and in being accompanied by hyperæsthesia. It differs from *hyperæsthesia* in being a spontaneous pain, while the latter is pain only upon contact.

TREATMENT. If we can remove the underlying cause, we shall cure the trouble, so our remedies should first be addressed to it. In any case the patient demands something to relieve the pain. In the way of internal remedies we can use salicylate of sodium, quinine, antipyrine, phenacetine, some form of opium, hyoscyamus, valerian, and other like drugs. Externally, relief may be obtained by galvanism, blistering, a mustard leaf over the center from which emanates the nerve (Crocker), hot or cold water in a rubber water-bag, either alone or alternately; rubbing

in Squibb's oleate of mercury or morphine, menthol pencil, chloroform liniment, tincture of aconite, and the like.

Dermatitis Blastomycotica. Under the name of pseudo-lupus or blastomycetic dermatitis, T. C. Gilchrist and W. R. Stokes[1] described a disease that has been recognized for a long time and regarded as a lupus, or at least a scrofuloderm. Since the publication of their observations some seventeen cases of the disease have been reported, mostly by dermatologists of the United States. J. N. Hyde[2] has made the most thorough studies of the affection, and on his writings this account is founded.

SYMPTOMS. The disease usually begins as a split-pea sized round papule which may change into a pustule. New lesions crop up or the original lesion slowly enlarges in one or several directions so as to form a patch or patches. These may be papillomatous in character, on a reddened base and with a sharply defined border, with crusts, and resemble very closely patches of tuberculosis verrucosa. Or the disease may creep over the skin, healing as it goes, and leaving a thin, white, atrophic cicatrix. Or ulceration progresses beneath the patch, causing great destruction of tissue. The course of the disease is very chronic.

The disease occurs on the face, neck, scrotum, hand, wrist, and lower extremities.

ETIOLOGY. Invasion of the skin by the yeast fungus is the cause of the disease. The majority of the patients are men, and all are of middle age. Tuberculosis was present in some of the patients.

PATHOLOGY. There are many miliary abscesses, in most of which the fungus is found. There are also hypertrophy of the epithelial layer of the skin, a large number of polymorphonuclear leucocytes, and giant cells resembling those found in tuberculosis.

The parasites have a capsule, a transparent zone, a central protoplasmic mass, and a vacuole within the protoplasm. The organism multiplies by budding, the buds being of all

[1] Johns Hopkins Hosp. Rep., 1897, viii., 46, and Journ. Cutan. and Gen.-Urin. Dis., 1897, xv., 393.

[2] Diseases of the Skin. Philadelphia, 1900.

sizes, several often starting from the mother body at the same time.

DIAGNOSIS. From *tuberculosis verrucosa* blastomycetic dermatitis differs in its more rapid course, its wider spread, and the halo about it being less violet in color. But an appeal to the microscope is the only reliable means of diagnosis.

TREATMENT. The iodide of potassium in large doses exerts a remarkably ameliorating influence on the disease, but radical destruction of the patch by the curette or its ablation by the knife is the most reliable curative agent.

The PROGNOSIS is bad if blastomycotic septicæmia sets in. Otherwise a cure should result if the disease is subjected to treatment early in its course.

Dermatitis Bullosa. See Epidermolysis.

Dermatitis Calorica is the inflammation of the skin produced by heat or cold, and divides itself naturally into two divisions, viz., D. ambustionis and D. congelationis.

Dermatitis ambustionis is the effect of heat upon the skin, the source of the same being either natural, as from the sun, or artificial. According to the intensity and prolonged action of the heat and the resistance of the skin will be the damage inflicted on the skin. A slight degree of heat gives rise to a passing erythema. Burns are due to a greater amount of heat, and are described for convenience as being of three degrees. In the first degree the skin is reddened, hot, and somewhat swollen; in the second, the damage is greater and vesicles and bullæ are formed; and in the third, there is complete destruction of the skin followed by gangrene. There is always considerable pain with any burn, and if of great extent we have rise of temperature and shock. Extensive burns may be dangerous to life even if not of very high degree, and burns involving one-half the cutaneous surface are generally fatal. The cause of death in such cases is uncertain. One theory, as put forth by Lustgarten,[1] is that it is due to a toxin developed by the lodgement of micro-organisms of putrefac-

[1] Med. Rec., 1891, xl., 152.

tion upon the eschar, probably a ptomaïne similar to muscarin. Some of the other theories are nerve-shock, ulcerations of digestive tract, nephritis, decomposition of the red blood-globules; but no one of these is satisfactory in all cases.

TREATMENT. The treatment of severe burns commonly falls into the hands of the surgeon. In simple burns the pain may be relieved by painting them with a five to ten per cent. solution of cocaine, and then applying Carron oil, consisting of equal parts of linseed oil and lime-water, to which may be added five per cent. of carbolic acid, absorbent cotton being soaked with the oil laid over the burn and covered with impermeable rubber tissue. This forms an admirable dressing that may be left on for several days, if care is taken to disinfect the part thoroughly before applying it. If this is not at hand, the part should be dusted thickly with flour or cornstarch until it is procured. Or the burns may be covered with a varnish of linseed oil and wax, containing five per cent. of salicylic acid. Or they may be powdered with bicarbonate of sodium or any of the antiseptic powders. Or the bullæ and vesicles may be opened and the surface painted with a two to five per cent. solution of picric acid. The excess of fluid is to be drained off and the surface covered with rubber tissue or soft gauze that is to be left on for two or three days. Deep and extensive burns must be treated on surgical and strictly antiseptic principles. Lustgarten, in the paper referred to, recommends the administration of atropine as a physiological antagonist to the ptomaïne, the removal of necrotic portions of skin, and dressing the wound with carbonate of magnesium, one part, and oleum rusci, two parts. All cases of any magnitude demand absolute rest in bed. The continuous water-bath of Hebra is excellent where it can be had.

In sunburn the application of cold cream and a dusting powder or calamine lotion is usually sufficient. As a preventative the skin may be anointed with the grease paint used by actors, preferably one of brown color. A calamine lotion, used freely, is one of the most efficient and agreeable agents for preventing sunburn.

Dermatitis congelationis, or "frostbite," is the action of cold upon the skin. Like heat, cold produces varying degrees of damage to the skin; if not very intense, the effect is an erythema—"erythema pernio," "chilblain"—which is passing. These are seen upon the hands, feet, and face as bluish or purplish-red, circumscribed patches, which are cool to the touch, but are accompanied by a feeling of heat, smarting, or burning, both while forming and when the parts again become warmed. To those predisposed to chilblains, dampness accompanied by only very moderately cool temperature is sufficient to produce them. Hutchinson speaks of the chilblain diathesis to indicate the condition found in these people. Their circulation is poor, and they are anæmic. Greater degrees of cold at first cause the parts to look white, dead, and wrinkled. When the cold is lessened redness and swelling supervene. Longer exposure may produce bullæ and vesicles, or gangrene, either on account of prolonged anæmia or inflammatory reaction from too sudden warming. Fingers, toes, nose, or ears may be lost in consequence, mortification setting in. Death may result from septicæmia.

TREATMENT. The best preventive treatment of chilblains is the wearing of woollen coverings on the affected parts, and endeavoring to improve the general health of the patient and to quicken his circulation. To the latter end we may use warm foot-baths, containing salt, at night, followed by frictions with alcohol. When they occur stimulation is necessary, for which we may use iodine, either in tincture or ointment; ichthyol, twenty to fifty per cent. in water; or equal parts of camphor and belladonna liniment; or—

℞ Ol. cajuputi,
Liq. ammon. fort.,
Sapo. liniment. co., } āā ʒij; ad ʒiij; āā 8 ad 100 M.

or simple frictions. Care should be taken in severe frostbites not to allow the parts to become warm too rapidly, and nothing is better than rubbing them with snow while the patient is kept in a cool room. When sloughing or ulceration is begun it must be treated on surgical principles.

Dermatitis Contusiformis. See Erythema nodosum.

Dermatitis Epidemica. Under this name Savill[1] has reported the occurrence, in Paddington Infirmary, of a number of cases of an apparently contagious disease of the skin, that began either as a discrete papular eruption, or as erythematous blotches like erythema nodosum or papulosum, or as small, flat papules enlarging at the periphery and spreading like ringworm. This stage lasted three to eight days. It was followed by the second stage, which was one of exudation or desquamation, and lasted three to eight weeks. However the disease began, the lesions soon ran together and formed a crimson surface of thickened and indurated skin, continually shedding its cuticle in scales or flakes of various sizes, sometimes mingled with drier exudation. In the second stage it assumed either a moist type, like eczema madidans, or a dry one like pityriasis rubra. About two-thirds of the cases were of the moist variety, and almost all at some period showed slight moisture, either in the flexures of the joints or behind the ears. Continuous exfoliation was present in all the cases. The third stage was one of subsidence. By degrees the inflammation lessened, leaving an indurated, thickened skin, with polished brown appearance, which was sometimes raw, or parchment-like, smooth and shining, or cracked, or purpuric, especially in aged people.

The disease began most often in the skin-folds of the face and upper extremities; and involved either the whole body or limited areas. It generally spread by continuity. The hair and nails were all shed.

The constitutional symptoms were anorexia and prostration. There was either no change in the body-temperature or a slight rise in the evening during the height of the disease. Itching and burning were marked, and there was considerable suffering experienced in those cases in which the epidermis was shed. Relapses were frequent. Albuminuria was found in half of the cases, and death occurred in about 12.8 per cent. of the cases.

More men than women were attacked, and advanced age

[1] Brit. Journ. Dermat., 1892, iv., 35.

predisposed to it. A specific micro-organism is thought to have been found in it.

Clinically these cases resemble dermatitis exfoliativa, an instance of the contagion of which I have met with. Its proper place has not been determined as yet.

The TREATMENT of the disease was by antiparasitic remedies, but was not very satisfactory.

Dermatitis Exfoliativa. Synonyms: Pityriasis rubra (Devergie and Hebra); Eczema foliaceum seu exfoliativum; (Fr.) Dermatite exfoliatrice ou exfoliative généralisée, Herpétide exfoliative, Erythrodermie exfoliante.

An inflammatory disease of the skin involving the whole cutaneous surface, and characterized by redness, dryness, and abundant desquamation.

The terms dermatitis exfoliativa and pityriasis rubra are used interchangeably by most authorities of the present time. If one reads the description of pityriasis rubra, as given by Hebra, and of dermatitis exfoliativa, as given by Wilson, he will find that the chief difference between them is in prognosis, the first being spoken of as uniformly fatal, and the second as tending to recovery in many instances. Further, there are not a few cases of general exfoliating dermatitis that follow psoriasis, eczema, pemphigus foliaceus, and lichen ruber, that present symptoms identical with those of dermatitis exfoliativa, without antecedent disease. It seems justifiable, therefore, to divide dermatitis exfoliativa into two varieties, namely, a primary and a secondary.

1. *Primary dermatitis exfoliativa* or *Pityriasis rubra* of Hebra.

SYMPTOMS. This disease begins as one or more erythematous patches in the folds of the joints, upon the upper part of the chest, or elsewhere, and these patches gradually enlarge. At the same time new patches develop, and, increasing in size, join the original ones. In this way the whole surface may become red within three days, or a month or more may elapse before the whole surface is implicated. The palms and soles may be unaffected for days or weeks. The skin is dry and of a

bright red at first, without thickening and infiltration, the redness lessening and leaving a yellow stain on pressure. In a few days, say from six to twelve, scaling begins and the skin becomes of a darker red; it may even become violaceous. The scales may be large, thin, grayish, attached at their upper border and loose elsewhere, being turned up at their edges. They may be small and adherent in the center. The amount of scaling is so great that handfuls of scales may be gathered from the bed after a night's rest. After a few weeks the epidermis may be raised and shed from the hands and soles in the form of a continuous sheet, sometimes forming a complete cast of the part and leaving a red, dry, glazed surface. There is a marked enlargement of the glands in the groin, so that the whole packet of glands stands out prominently against the red skin. The disease is chronic and the scaling constant, though marked with exacerbations. After lasting some time there is a certain amount of infiltration of the skin, and it seems to grow too small for the body and looks stretched and shiny in places. Thus are produced ectropion and a puckered condition of the mouth. We may also find cracking about the joints and moisture in these regions. Furuncles, bullæ, or pustules may complicate matters. The hair may be shed from all parts and the nails become raised from their beds and shed. The mucous membranes participate in the disturbance, the tongue becomes markedly red, the lips cracked, and the nasal secretions are increased. With the ectropion there is conjunctivitis.

The disease begins in some cases with a chill, followed by a fever that may rise to 104° F. Fever is present in all cases during the early period, and may continue throughout. It is sometimes continuous, with evening exacerbations; at other times it is only at night. Diarrhœa often is met with, and there may be vomiting, albuminuria, and pulmonary congestion. The patient complains of a feeling of chilliness and of pain, tenderness, stinging, burning, or tingling of the skin. There is usually no itching. The sensibility of the skin is preserved and the secretion of sweat may be normal, or lessened, or increased. The

duration is very variable. Recovery may take place in six months or a year, or the course may be chronic, the patient dying either in a few months or after years, by a gradual marasmus, though the end is usually hastened by pulmonary complications.

Cases of localized dermatitis exfoliativa have been reported, but they are rare. The tendency is for the disease to become general, though it may take years to do so. Cases of a recurrent type have been met with.

ETIOLOGY. We know very little about the causes of the disease. It is a disease of adults, and is more common in men than in women. It may occur in children. It has been thought to be predisposed to by alcoholism, gout, and rheumatism. An attempt has been made to trace a relationship between it and general tuberculosis. There may be a history of scaling skin diseases in the family. At present we cannot speak with any certainty as to its etiology.

2. *Secondary dermatitis exfoliativa.* A condition of the skin exactly resembling the primary form is seen from time to time to follow upon or develop from a psoriasis, eczema, pemphigus foliaceus, and lichen ruber. I have seen one case follow lichen planus. The too vigorous use of chrysarobin has been known to be followed by it. These cases differ from the primary form only in their antecedent skin disease. Once developed they run the same course as the primary form, either becoming well quickly or falling into a chronic state from which recovery may or may not take place. The prognosis is, however, much better in the secondary than in the primary form, recovery after two or three months being frequent.

Crocker states that the disease may occur in children, though it is very rare. In them it runs a more acute course and is attended by severe constitutional symptoms. It is usually of the secondary variety.

PATHOLOGY. Histological examination shows that the disease is a dermatitis, quite superficial at first, but when it has lasted some time the whole depth of the skin is involved and eventually there is new connective-tissue formation, which subsequently undergoes cicatricial con-

traction, with abundant pigmentation, hyperplasia of the elastic fiber bundles, and obliteration of the skin appendages. (Crocker.)

Diagnosis. When the features of the disease, as laid down in the definition, are remembered, there should be no difficulty in recognizing it. No other disease involves the whole surface in a uniform dry and scaling redness. It differs from *psoriasis* in being universal, in an entire absence of thick, silvery-white scales, and in leaving a smooth red surface when its papery scales are removed. Should it be secondary to a psoriasis, there will be no difficulty in obtaining a history of that disease. It differs from *eczema* in being a dry disease, with little infiltration, in its large papery scales, and in itching but slightly. Eczema may be almost universal, but some places are apt to be spared; there is always moisture of a sticky sort present somewhere or a history of the same; its scales are small and its itching intense. It differs from *pemphigus foliaceus* in an absence of flaccid bullæ. It differs from *lichen ruber* in an entire absence of papules and in the whole course of the disease. All these diseases may be general, but it is exceedingly rare for them to become universal, and it is always possible to obtain a history of their having been present at some time in a case of secondary dermatitis exfoliativa. It is hardly likely that *scarlatina* could be confounded with dermatitis. A few days' watching would in any event decide the question.

Treatment. The results of treatment of this disease leave much to be desired. Many internal and external remedies have been tried, but they all are of very uncertain value. There is no doubt that the patient is most comfortable when the skin is well oiled, and vaseline of good quality or pure olive oil answers well for this purpose. The general health is to be watched over, iron and quinine administered, and care exercised to preserve the strength by judicious feeding without stimulation. Diuretics may be given with the idea of relieving the congestion of the skin. Carbolic acid has been recommended, but in my hands proved worse than useless in one case. Pilocarpine, or jaborandi, is recommended by Hardaway in acute cases.

Arsenic should not be given till late in the disease, if at all. Crocker recommends enveloping the body in calamine lotion, and giving bicarbonate of potassium every four hours in twenty-grain doses, with twelve grains of citric acid and three to five grains of quinine, the whole taken while effervescing. Sherwell has reported several cases cured by the continuous use of linseed oil, both internally and externally. The patient is to chew or take in milk several ounces of flaxseed in twenty-four hours. He is to be kept in bed with a rubber sheet under him, and to be saturated, as it were, in crude linseed oil. If the oil is not used abundantly, it is worse than useless. This plan of treatment worked admirably in one of my cases. Thyroid extract has proved helpful in some cases. In one of mine it aggravated the disease, and the patient made a good recovery after it was stopped, and she was treated with vaseline, soda baths, and careful feeding.

In the primary form, or pityriasis rubra, treatment usually only alleviates the sufferings of the patient, but does not cure the disease.

Dermatitis Exfoliativa Neonatorum is a disease of newborn children, first described by Ritter von Rittershain,[1] and said by him to be quite often seen in the foundling asylums of Prague.

SYMPTOMS. It begins at the mouth as an erythema, and thence spreads to the trunk and extremities. Then the epidermis raises itself from the cutis, rumples, and spontaneously exfoliates in large folds leaving a dry skin, or there may be exudation under the epidermis. It begins usually between the second and fifth week of life, and lasts seven or eight days. Relapses may occur. There is no fever nor digestive disturbances. Furuncles, abscesses, or phlegmonous infiltration, with gangrenous destruction, may follow. Recovery takes place in about half the cases. It is supposed to be a pyæmic condition of the skin.

TREATMENT. Alkaline lotions will prove beneficial in the early stage. Later, a protecting ointment, such as

[1] Arch. f. Kinderheilkunde, 1880, i., 53.

that of oxide of zinc, or simple vaseline, followed by corn-starch, will be indicated.

Dermatite Exfoliative Aiguë Bénigne. See Erythema scarlatiniforme.

Dermatitis Gangrænosa or Sphaceloderma. Gangrene of the skin may be due to a great variety of causes. Many cases are due to purely local causes, such as burns, bruises, compression, chemical action, and the like. It is seen in the course of diabetes, albuminuria, and some cardiac diseases; with degenerative changes taking place in the vascular walls of arteries, or plugging of their lumen; and in connection with other skin diseases, as carbuncle. Besides these we have a group of little-understood cases of gangrene, due, apparently, to nervous influences, and occurring in connection with diseases of the nervous system. These may occur anywhere, and may be superficial or deep, behave like surgical gangrene, and are to be treated on the same principles. Other cases have been described as appearing upon some slight injury, such as running-felon or finger. The lesions run up the arm in the form of vesicles or pustules that soon change into flaccid bullæ, which rupture, crust and form an eschar. When this separates a depressed cicatrix is left. The process may continue for some time with many relapses. It is always to be remembered that gangrene occurring in hysterical subjects is unimportant. If such cases are carefully observed it will be observed that the spots appear most readily by the patient's finger, usually on the left hand. A case of that kind was recently seen by me, which rapidly became well when I told the girl that she knew the cause of the trouble as well as I did, and need have no more of it unless she liked.

In all these forms of gangrene attention must be given to the general health of the patient and the parts must be treated on general antiseptic principles.

Two forms of cutaneous gangrene that have received names that must be noticed here. They

are: 1. Symmetrical gangrene, or Raynaud's disease; and, 2. Dermatitis gangrænosa infantum.

1. *Symmetrical gangrene.* This was first described by Maurice Raynaud,[1] and since then has been observed by others, although it is a very rare disease. It most often attacks the second and third phalanges of the fingers and toes, next most frequently the nose and ears; but any part may be affected. The parts become pale or blue and hard, and then swell. They feel numb, but the patient may experience darting or stabbing pains in them. If pricked, no blood escapes. The process may stop here and the parts may return to their normal state; or after a time, hours or weeks, they become black, a line of demarcation forms, and separation of the affected part takes place. The process may stop short of the complete destruction of the part and recovery may take place, though relapses are liable to occur. It may result simply in a peculiar induration and thinning of the fingers. The disease is symmetrical. It may involve all four extremities, but usually only two are affected. Bullæ may form. The nails may fall.

ETIOLOGY. Men are more often affected than women. People of all ages are liable to it. Exposure to cold seems to be a causative factor, and not a few of its victims have been subject to chilblains or other symptoms of poor circulation. The malarial and other cachexiæ and the gouty habit have been supposed to be predisposing causes. It is probably of neurotic origin.

TREATMENT. The internal treatment that has done best has been the administration of quinine and belladonna. Locally, galvanism may be tried, as it has done good. Stimulation by means of lotions of various kinds may be tried. Cold applications are said to be better than hot. If gangrene has occurred, it must be treated on surgical principles.

PROGNOSIS. The outlook is not good. Death may result in those who are not robust. Even if one attack is recovered from, another is apt to occur.

2. *Dermatitis gangrænosa infantum* (Crocker). Syno-

[1] Thèse de Paris, 1862.

nyms: Varicella gangrænosa (Hutchinson); Pemphigus gangrænosus (Stokes); Rupia escharotica (Fagge); Ecthyma infantile gangréneux (Pineau); Gangrènes multiples cachectiques de la peau; Ecthyma térébrant de l'enfance (Baudouin).

Under these names has been described a disease of the skin that occurs most often after varicella, but may occur after other diseases of the skin in children, such as variola, purpura, erythema nodosum. It consists essentially in the formation of deep or superficial round or oval ulcerations beneath a black slough, following upon a varicella or other pustule. The lesion when fully formed may be one inch or more in diameter, and three-quarters of an inch deep. The wider the slough, the deeper is the ulcer. Around the slough is a red areola. Crocker says that if the gangrene occurs while varicella is still present, it begins on the head or upper part of the body, and then looks like a vaccination pustule; while if it begins late in the course of the disease, the lesions will be located on the lower half of the body, especially the buttocks and thighs. In the latter case the affected parts are riddled with ulcers of all sizes, shapes, and depths. If several ulcers run together, very large and irregular ones may form. If the lesions are extensive or numerous, they may cause death very frequently by pulmonary complications.

Etiology. Infants and young children under three years of age are those affected by this disease, and most of them are girls. Debilitating diseases, such as congenital syphilis, tuberculosis, and scrofula so called, predispose to the disease. In my service at the Infants' Hospital on Randall's Island cases of this sort were not infrequent. In an epidemic of varicella, occurring in 1890, two cases were met with, one quite extensive upon the upper part of the back. The children [illegible] in the institution are from the lowest [illegible] and the disease seems to be a [illegible] conditions plus a possible [illegible]

[illegible] upon general [illegible] good milk and hygienic sur[illegible] addressed as far as may be to

the underlying constitutional condition are the best means for combating the disease. Crocker recommends quinine and sulpho-carbolate of sodium, five grains every three hours. Locally, the Randall's Island cases were treated with iodoform and antiseptic dressings. Aristol would probably answer well.

PROGNOSIS. The prognosis is not good in extensive cases. Death is apt to result from lung complications or pyæmic infection.

Dermatitis Herpetiformis. This name was first suggested by Duhring,[1] of Philadelphia, for a disease which is characterized by great multiformity and marked grouping of the lesions; by pruritus of varying intensity; by chronicity of course; and by a strong tendency to relapse. Under it he includes the hydroa of Bazin and Tilbury Fox, the herpes phlyctænodes of Gibert, the herpes gestationis of Bulkley, pemphigus pruriginosus and circinatus, pemphigus à petites bulle, hydroa bulleux, and the herpes circinatus of Wilson. Though the name has been adopted generally, the exact status of the disease has not been settled. The account of the disease given here is based upon Duhring's writings.

SYMPTOMS. In severe cases there may be prodromata for several days preceding the outbreak, such as malaise, constipation, fever, chills, sensations of heat or cold, or these alternating, and itching. In mild cases these are absent. The onset of the disease may be gradual or sudden—the latter not infrequently. The eruption may be diffused over the greater part of the general surface, or it may be in localized patches. Itching and burning, which are severe, precede or accompany the outbreak. It may begin as an erythematous, vesicular, bullous, pustular, or papular eruption, or by a combination of two or more of these, the multiformity being a characteristic. It shows a tendency for one variety of lesions to pass over into another, either during the attack or at some relapse. Grouping of the lesions is a marked characteristic of the disease. The relapses occur at intervals of weeks or

[1] Journ. Amer. Med. Assoc., 1884, iii., 225.

months. All regions are invaded, the course is essentially chronic, and in pronounced old cases the skin is excoriated and pigmented. The mucous membranes may be involved.

Dermatitis herpetiformis erythematosa. This form is usually of urticarial or erythema-multiforme type, and occurs either in patches or diffused. The circumscribed patches may coalesce and form larger patches with marginate outline. The color varies with the age of the lesion, becoming darker with age. There may be maculo-papules, flat infiltrations, or vesico-papules. It may continue in this way for days or weeks, but usually it changes to the multiform type. There is pruritus.

Dermatitis herpetiformis vesiculosa. This is the form most usually met with. The vesicles are from pinhead- to pea-sized, flat or raised, irregular or stellate in shape, glistening, pale-yellow or pearly, firm, tensely distended, and without areola. There may be papules, papulo-vesicles, vesico-pustules, and sometimes bullæ. The lesions are disseminated, but aggregated into clusters of two, three, or more, or may form groups as large as a silver dollar. If the vesicles are near together, they tend to run together and form blebs, which are raised and surrounded by a pale or distinct red areola, and of a puckered or drawn-up appearance. The eruption is usually profuse. All regions are affected. Severe itching and sometimes burning last until the vesicles are broken, which may not be for several days. Sometimes there is a good deal of constitutional disturbance. This is Fox's hydroa herpetiforme.

Dermatitis herpetiformis bullosa. In this form we have more or less typical bullæ filled with cloudy or serous fluid, from pea- to cherry-sized, irregular or angular in outline, and with or without an inflammatory base. They occur in groups, with red and puckered skin between, and more or less vesicles and pustules disseminated over the skin. All parts of the body are affected. They come out in crops at intervals, rupture in two or three days, and crust over. This is Fox's hydroa bulleux.

Dermatitis herpetiformis pustulosa. This form is less

months. All regions are invaded, the course is essentially chronic, and in pronounced old cases the skin is excoriated and pigmented. The mucous membranes may be involved.

Dermatitis herpetiformis erythematosa. This form is usually of urticarial or erythema-multiforme type, and occurs either in patches or diffused. The circumscribed patches may coalesce and form larger patches with marginate outlines. The color varies with the age of the lesion, becoming darker with age. There may be maculo-papules, due inflammations, or vesico-papules. It may continue in this way for days or weeks, but usually it changes to the multiform type. There is pruritus.

Dermatitis herpetiformis vesiculosa. This is the form most usually met with. The vesicles are from pinhead- to pea-sized flat or raised, irregular or stellate in shape, yellowish, pale yellow or pearly, firm, tensely distended, and with an areola. There may be papules, papulo-vesicles, vesicles, pustules, and sometimes bullæ. The lesions are discriminated but aggregated into clusters of two, three or more, or may form groups as large as a silver dollar. If the vesicles are near together, they tend to run together and form blebs, which are raised and surrounded by a pale or dusky red areola, and of a puckered or shrunken appearance. The eruption is usually profuse. All regions are affected. Severe itching and sometimes burning. If rubbed the vesicles are broken, which may not be for several days. Sometimes there is a good deal of constitutional disturbance. This is Fox's hydroa herpetiformis.

Dermatitis herpetiformis bullosa. In this form we have more or less typical bullæ filled with cloudy or serous fluid, from pea- to walnut-size, and irregular or angular in outline, and with or without an inflammatory base. They occur in groups with red and puckered skin between, and more or less vesicles and pustules disseminated over the skin. All parts of the body are affected. They come in crops at intervals, rupture in two or three days, crust over. This is Fox's hydroa bullosa.

Dermatitis herpetiformis pustulosa. This form is less

clearly defined than the vesicular form, because vesicles, vesico-pustules, and bullæ often occur at the same time. It may occur uncomplicated and be pustular throughout. The pustules are acuminated, round or flat, tense or flaccid,

FIG. 18.

Hand of a person affected with dermatitis herpetiformis. (From a replica of Baretta's model, No. 1333, in the Museum of the St. Louis Hospital, Paris.)

and vary in size from a pin-point to a twenty-five-cent piece. The large pustules generally have an areola. They tend to flatten, spread, and dry in the center, and to group. On the trunk we may find a central pustule surrounded by

a variable number of small pustules. They are opaque, and whitish or yellowish. There may be slight hemorrhagic exudation into them. They are slow of development, an attack lasting from two to four weeks. There is more marked constitutional disturbance than in the other forms. It is accompanied by heat, pricking, and itching. It sometimes precedes, follows, or alternates with the other forms.

Dermatitis herpetiformis papulosa. This is the rarest and mildest variety of all, and consists in small or large, irregularly shaped, firm, reddish or violaceous papules in disseminated groups, the papules being usually excoriated on account of the scratching to relieve the severe itching. Ill-defined papulo-vesicles are also present.

Dermatitis herpetiformis multiforme is simply a combination of all the preceding varieties, with the type changing from time to time. Pigmentation is a feature of this variety as well as of all the others, and occurs after the disease has lasted for some years.

Etiology. The disease occurs in both sexes, and is supposed to be a tropho-neurosis. It occurs at all ages, but most commonly between thirty and sixty years of age. My oldest patient was a woman of eighty-two. Little is known as to its causes. It occurs quite independently of pregnancy, and in one case became better during the same. Another case was aggravated during pregnancy, and by irregular menstruation. One case seemed to arise from a nervous shock. Most cases are seen in the subjects of nervous exhaustion of various kinds. By Bazin the gouty diathesis was considered to be a predisposing cause of hydroa, and hence possibly of dermatitis herpetiformis. Winfield has reported four cases in which sugar was found in the urine. Occasionally septicæmia may stand in causal relation to the disease.

Pathology. A careful study of herpetiform hydroa has been made by G. T. Elliot.[1] This is considered by Duhring as one variety of the disease under consideration. He shows that the vesicles originate in the epithelium of the sweat ducts, several being implicated at the same time,

[1] New York Med. Journ., 1887, xlv., 449.

and that the ordinary signs of inflammation are present. He believes that the inflammation is secondary, and is seated in the papillary layer of the corium. Degenerated nerve-fibers are found, and the disease is believed to be due to trophic nerve disturbance. Laredde and Perrin[1] are of the opinion that eosinophile cells are closely related to the process of bullous formation, and that there is a vaso-motor paralysis allowing of the escape of bloody or lymphatic serum in the connective tissue and the formation of bullæ. They raise the question of a possible relation between renal action and the escape of eosinophile cells. T. C. Gilchrist's[2] studies show that in the early stages the vesicles are formed beneath the epidermis on account of an inflammatory process going on in the corium. He also notes the presence of the eosinophile cells.

DIAGNOSIS. The disease must be differentiated from erythema multiforme, eczema, and pemphigus. It differs from *erythema multiforme* in not occurring markedly upon the backs of the hand, wrists, forearms, and feet; in its more intense itching, instead of the burning of erythema; in its chronicity and greater tendency to relapse; and in its obstinacy to treatment. If the case is watched for a time, the character of the eruption will be seen to change.

The vesicular form of dermatitis herpetiformis differs from *vesicular eczema* in having larger vesicles of angular or stellate outline, and with no disposition to rupture; in the grouping of these vesicles in small clusters; in its herpetic character; more intense itching; greater constitutional disturbance; and greater obstinacy to treatment.

The papular form differs from *papular eczema* in the irregularity of the size and form of the papules; their strong disposition to group; their slow evolution; their appearance in crops with free intervals; the chronicity of its course; and obstinacy to treatment.

It differs from *herpes iris* by being a general eruption, and by not having the groups of vesicles arranged in circles about a central vesicle.

It differs from *pemphigus* by the grouping of its lesions,

[1] Ann. de derm. et de syph., 1895, vi., 281.
[2] Johns Hopkins Hosp. Rep., vol. i.

by their more inflammatory, herpetic aspect, and by the occurrence of vesicles and pustules at the same time with the bullæ. If only bullæ are present, the diagnosis is difficult.

Impetigo herpetiformis is always and only pustular, and never has erythematous patches, vesicles, or bullæ. It develops by new lesions springing up in a circular manner about the old ones. It is unattended by pruritus, and is a grave disease, often ending fatally.

A well-marked case of dermatitis herpetiformis with erythematous patches, grouped vesicles, pustules, and bullæ of stellate form, intensely pruritic and with a myriad of excoriations, is so characteristic as to admit of no doubt in diagnosis.

TREATMENT. This disease is one of the most rebellious to treatment. Hygienic measures, fresh air, proper and restricted diet, abstinence from all alcoholics, and relief from all nervous disturbances must be secured as far as may be. Nerve tonics may be given, such as arsenic, strychnine, cod-liver oil, hypophosphites, and quinine; alkaline diuretics, belladonna in full doses, laxatives, all may be tried. Phenacetine, five to ten grains, three times a day, has done well in some cases. Antipyrine exerts a more powerful influence, but is not so safe. Locally Duhring has found the best treatment to be sulphur ointment containing two drachms of sulphur to the ounce, well rubbed in with vigorous friction as in scabies. In one marked case this treatment gave most satisfactory results in my hands. The frictions should be continued for an hour at a time. This plan is not suitable for the erythematous variety. The spinal douche acted most favorably in one of my cases. Other authorities recommend alkaline and bran baths, dusting on starch powder with oxide of zinc, Lassar's paste, resorcin ointment, liquor carbonis detergens in water, ʒij to ʒviij; calamine lotion, liquor picis alkalinus, tar ointment, solutions of carbolic acid, ʒj to ℥j, dabbed on. Guaiacol, five per cent. in ointment base, controls the itching. The possibility of systemic poisoning from absorption must be borne in mind. Camphor and chloral, one to five per cent., combined in ointment or lotion, also controls the

itching. All these will afford a certain measure of relief, but the disease is apt to laugh at our efforts to drive it away.

PROGNOSIS. The duration of the disease is indefinite. Some mild cases may recover in a short time, never to relapse. The course of the disease is essentially chronic; it may last for many years; it shows a strong tendency to relapse at longer or shorter intervals; and, as a rule, does not materially affect the patient's health. Old people and those not otherwise in good health may be worn out by the itching and the discomforts of the disease.

Dermatitis, Malignant Papillary. See Paget's disease of the nipple.

Dermatitis Medicamentosa. By this is meant inflammation of the skin due to the systemic ingestion of drugs. There are a great number of drugs that may cause eruptions upon the skin in susceptible individuals. These effects are seen but rarely with some drugs, and quite constantly with others. The *modus operandi* of drugs in producing eruptions is probably not the same in all cases. Some, doubtless, act by irritating the skin while circulating in the blood; some while being excreted by the glandular apparatus; while most of them do so by direct or reflex excitation of the vasomotor nerves. Idiosyncrasy is marked in all of them. Erythema is the principal feature of nearly all drug eruptions, to which may be added vesiculation or pustulation. Two drugs, bromine and iodine, produce pustular eruptions in nearly all cases when ingested. Most drug eruptions appear with more or less suddenness, and disappear quite promptly when the drug is stopped. They are symmetrical and general in distribution as a rule. They may be universal or localized. The cause of all doubtful eruptions of an erythematous type should always be sought for in the ingestion of some drug. As a rule, little if any treatment is required for this form of dermatitis apart from stopping the drug. Sometimes the system becomes accustomed to a drug, and after a time does not react unfavorably to it if its administration is persisted in. With most drugs this is not the case.

The subject of drug eruptions is so large a one that here no more than a skeleton account can be given. For fuller particulars the reader is referred to Morrow's masterly article in his *System of Genito-Urinary Diseases, Syphilology, and Dermatology*, vol. iii., upon which this section is founded.

Acids: *Benzoic* acid and its compounds may produce an eruption of urticaria, maculo-papules, or erythema. *Boric* acid and its compounds may cause an erythematous, psoriatic, or erythemato-bullous eruption. The psoriatic form is unusual. *Carbolic* acid causes an erythema that may be scarlatinous in character. *Nitric* acid, in rare cases, gives rise to a pustular eruption. *Salicylic* acid and salicylate of sodium produce erythematous, urticarial, vesicular, bullous, petechial, or purpuric manifestations. *Salol* has produced urticaria. *Tannic* acid caused an erythema in one case.

Aconite gives rise to itching, vesicular, pustular, or bullous lesions.

Alcohol may cause a generalized erythema and urticaria.

Amygdala amara causes erythema.

Antifebrin may give rise to cyanosis.

Antimony causes an urticarial or vesiculo-pustular eruption.

Antipyrine gives rise to an erythema, consisting of small, irregularly circular, slightly elevated patches, which may be discrete or confluent, and is at times followed by desquamation. Profuse sweating and itching may accompany it, and it affects the chest, abdomen, back, and extremities, especially their extensor surfaces. It may be measly in character or purpuric. It has given rise also to bullous, furuncular, and purpuric eruptions.

Argenti nitras when used continuously may produce a grayish-black discoloration of the skin, or an erythemato-papular eruption.

Arsenic causes erythema of scarlatinal type, papules, petechiæ, urticaria, vesicles, pustules, zoster, and an erysipelatous eruption. Itching may attend some of these eruptions. Grayish or brownish discolorations of the skin have followed prolonged ingestion of the drug. Boils and

carbuncles have also been produced, as well as thickening of the skin of the palms and soles, and that over the knuckles, either in the form of diffused keratosis or as numerous small corns.

Belladonna produces a scarlatinal eruption with or without vesicles and pruritus. As the fauces are often reddened the resemblance to scarlatina is striking. It will clear up in twenty-four hours, and the eruption is patchy, not punctate. Moreover, there is none of the prodroma of

FIG. 19.

Bromideof potassium eruption in a child.

scarlatina nor the strawberry tongue. The pupils may be dilated.

Bromine, in combination with potassium, ammonium, and other bases, produces the well-known "bromic acne" so commonly seen in the treatment of epilepsy. It is an outbreak of dark-red inflammatory papules, papulopustules, and cutaneous abscesses that bear a close resemblance to acne, and, like it, often leave scars. It differs from acne in having a wider distribution and in occurring at all ages. This is the most common form of bromine eruption, but erythematous, urticarial, papular, ulcerative, verrucose, vesicular, and bullous eruptions have been met

with. Rarer forms are papillary hypertrophy, resembling condylomata, and large, irregular, elevated ulcers. It would be desirable to prevent these eruptions, but thus far there is nothing that will do so with certainty, except stopping the administration of the drug. Arsenic, or sulphide of calcium, or aromatic spirits of ammonia may be tried.

Calx sulphurata gives rise to vesicles, pustules, and furuncles; rarely to petechiæ.

Cannabis indica caused a vesicular eruption in one case.

Cantharides gives rise to erythematous and papular lesions.

Capsicum may cause erythematous and papulo-vesicular lesions.

Chloral produces erythematous, papular, urticarial, vesicular, and petechial eruptions. At times the chloral erythema bears a strong resemblance to scarlatina.

Chloralamide causes a general punctate hyperæmia with vesicular lesions with febrile reaction.

Cinchona and quinine produce all the primary lesions of the skin, though most frequently an erythema of scarlatinal type, attended by congestion of the fauces and followed by desquamation.

Conium causes an erysipelatous eruption as well as an erythematous one.

Copaiba and cubebs. Their most common eruption is an erythema which is often of a scarlatinal type, but may resemble measles, and may be followed by desquamation. Outbreaks of urticaria, vesicles, bullæ, or petechiæ may occur. Pruritus may be present. The odor of the drug may usually be detected in the breath.

Condurango is said to cause furuncles and acne lesions.

Digitalis produces an erythema of an erysipelatous, papular, or urticarial character.

Ergot, quite apart from the condition of ergotism, may cause vesicles, pustules, furuncles, and petechiæ.

Guaiacum and gurjun oil cause eruptions like those of copaiba.

Hydrargyrum gives rise to a scarlatiniform eruption, followed by desquamation, as well as urticaria, herpes, [illegible]pura, furuncles, and ulcers.

Hyoscyamus produces an itching erythematous eruption, with more or less œdema and wheals. Purpura has also followed its use.

Iodine and its compounds, like bromine, give rise to a pustular or papulo-pustular, acneiform eruption, usually upon the face, back, and upper part of the chest and arms; but often general. This is the most typical form of eruption, but an erythema limited to the face and chest or general, and urticaria, a vesicular erythema, or an eczema-like eruption, a bullous form resembling pemphigus, as well as carbuncular, petechial, and nodular eruptions, may occur. Sometimes there will be more than one type present. It is supposed that iodic eruptions occur more often in cases in which the kidneys are more or less inactive. They sometimes follow the administration of very small doses. It is thought that the iodide of sodium is less apt to cause cutaneous disturbances than are the other salts of iodine. At times the system becomes accustomed to the drug, or the kidneys acting more freely relieve the skin. The trouble may be relieved or, to a large extent, obviated by administering the salt largely diluted with vichy or seltzer water, or by giving it in milk. The free use of alkaline diuretics will relieve the skin. Arsenic has also been commended, but does no better here than in the bromine eruptions.

Ipecac in one case caused burning heat, with an erysipelatous eruption.

Iron is said to produce an acne; also erythematous, vesicular, and urticarial eruptions. The iodide of iron is the form that usually produces these eruptions.

Morphine may cause urticaria, ulcers, a papular, vesicular, or pustular eruption.

Nux vomica may give rise to a scarlatina-like erythema and a miliary eruption.

Oleum morrhuæ may cause an eczematous eruption or an acne.

Oleum ricini may cause an itching erythema.

Oleum santali may cause a general petechial eruption.

Opium causes itching and an erythema resembling scarlatina or measles in character, which though often widely

distributed, is not infrequently limited to certain regions.

Phenacetine may cause a general erythematous eruption.

Phosphorus causes bullous eruptions, and also purpura.

Pix liquida produces an erythema.

Potassium chlorate has caused a papular erythema, while bluish spots on the skin and a general cyanosis may occur after continuous use of the drug.

Quinine produces a scarlatiniform erythema, as well as urticarial, purpuric, vesicular, and bullous eruptions.

Rhubarb may cause a scarlatiniform erythema.

Salipyrin has caused œdema.

Santoninum produces an urticaria or a vesicular eruption.

Stramonium gives rise to an itching or burning scarlatinoid erythema, a petechial eruption, or an erysipelatoid inflammation.

Strychnine may cause a scarlatiniform rash.

Sulphonal produces a scarlatiniform erythema.

Sulphur causes dark discoloration of the skin, and an eczematous, pustular, furuncular, or papular exanthem.

Tansy has caused a varioliform eruption.

Tuberculin may cause scarlatiniform or measles-like patches of erythema, as well as a psoriasiform eruption.

Turpentine and terebene may cause scarlatiniform erythema and a papular and vesicular eruption.

Veratria gives rise to an erythematous eruption.

Beside these, Hyde and Montgomery mention the following drugs as having produced eruptions: anacardium, benzol, chinolin, chloroform, cocaine, creosote, duboisin, guarana, kava-kava, lactophenin, matico, pimpinella, and plumbum.

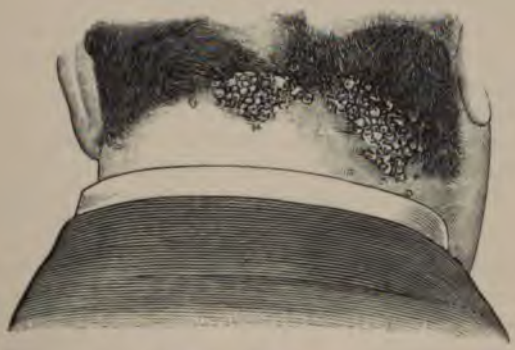
TREATMENT. The treatment of all drug eruptions is the same, namely, stopping the use of the drug and giving alkaline diuretics. Locally, soothing remedies should be applied, such as cold cream, vaseline, and oxide of zinc ointment, or preferably alkaline lotions.

Dermatitis Papillaris Capillitii. Synonyms: Dermatitis papillomatosa capillitii; Framboesia; Sycosis framboesia

(Hebra); Sycosis capillitii (Rayer); Mycosis framboesiodes, or Acne kéloidique, or Pian ruboïde (Alibert); Acne keloid.

Symptoms. This is one of the rare diseases of the skin. It begins as an eruption of small-sized papules upon the back of the neck at the margin of the hair. They are of the color of the skin, or slightly red with an inflammatory halo; exceedingly hard and firm; and when pricked they give vent to a little bloody serous fluid. Increasing slowly in number and crowding together, they form raspberry-like elevations with uneven, lobulated surfaces. Gradually the

Fig. 20.



Dermatitis capillitii.

disease spreads laterally and also upward upon the hairy scalp, even reaching the vertex after months and years. After a time the masses may soften a little and contain pus. At times they secrete a foul-smelling fluid, and crust. Gradually they become sclerosed and keloidal. Pustules may form on the hairy scalp, and little tufts of hair protrude out of them. When they become keloidal they may be bald or tufted with hair. Hairs plucked from the growths are sometimes normal and sometimes atrophied. There may be pain or tenderness, or there may be no subjective symptoms.

Etiology. Both men and women are affected, and the

disease may begin at any age. Negroes seem to be more subject to it than the white races. The etiology is obscure. It has been suggested that it may be due to the rubbing of the shirt collar.

DIAGNOSIS. If the characteristics of the disease are remembered, there should be no difficulty in diagnosis. In *sycosis* we have no hard tumors, and the single hairs are surrounded by pustules. *Warts* are not so hard, do not tend to increase in size, and do not become keloidal.

TREATMENT. The best treatment is to scrape away the small lesions with a curette and excise the larger ones. After either operation the base must be cauterized. They may be removed with the galvano-cautery. It has also been recommended to use sulphur preparations in the early stages, and in the later stages to apply a mercurial plaster for one to two weeks, alternating it with a ten to twenty per cent. resorcin or chrysarobin plaster.

PROGNOSIS. So far as reported, the growths are benign and have no effect upon the health of the patient. They are progressive and show no tendency to spontaneous recovery. They are obstinate to treatment and prone to relapse.

Dermatitis Repens. Crocker describes this as a spreading dermatitis, usually following injuries, and probably neuritic in character, commencing almost exclusively on the upper extremities. It begins about some slight injury, as about the finger-nails, and spreads over the affected limb with a well-defined, undermined advancing edge. The eruption suggests eczema rubrum by its raw, oozing, reddish surface, but its sharply defined, undermined spreading edge distinguishes it. In some cases it is papular and in others bullous in character. It runs a chronic course, sometimes leaves a superficial atrophy on healing, and is obstinate to treatment. It yields best to antiseptics, such as lactate of lead, hyposulphite of sodium, permanganate of potassium, salicylic acid, and white precipitate ointment.

Dermatitis from Roentgen Rays. In some 1300 exposures to the X-rays the statistics of N. S. Scott[1] show that

[1] Amer. X-Ray Journ., 1897, 1–57.

there will be one case of dermatitis. The dermatitis does not appear until some days or weeks after the exposure. The patient first notices an erythematous patch corresponding to the point of impact of the rays, attended by swelling of the skin. This is the mildest form and may soon disappear. In most cases the part is painful and the redness increases in area and assumes a purple hue. The pain when present is deep-seated and aching. Vesicles and sometimes bullæ form, and later the central part of the patch becomes raw, moist, and tends to remain for months without healing. The hair and nails may be shed, but they are not permanently lost, as a rule. It is not determined what the cause of the dermatitis is, whether the generation of ozone, or of heat, or of bombardment of the skin with infinitesimal particles of metal. The placing of a screen of aluminum gauze between the patient and the tube is recommended as a preventative of injury. As the cases arise on account of too long exposure with a tube placed too near the subject, short sittings and the greatest possible working distance would seem to be the most rational prophylaxis.

The TREATMENT is most unsatisfactory and is along surgical lines. In some cases the patch has been excised in the hope of obtaining a healthy surface.

Dermatitis Seborrhoïca. See Eczema seborrhoïcum.

Dermatitis Traumatica. This term is used to comprise all inflammations of the skin that are due to traumatic influences, such as blows, rubbing, and the like. It presents the usual signs of inflammation to a greater or less extent, even up to gangrene, according to the degree of traumatism and the susceptibility of the individual skin. The irritation of the skin due to scratching is a common instance of this form of dermatitis. Under certain circumstances it easily develops into an eczema. The chafing of the skin met with in horseback riding, in those unaccustomed to the exercise, is another common instance.

TREATMENT. The treatment of this form of dermatitis should be soothing, such as by the free use of dusting powders, alkaline lotions, or mild ointments, such as that

of the oxide of zinc. Unna[1] recommends for the prevention of the dermatitis due to horseback riding, that the part should be smeared with a weak resorcin or ichthyol ointment.

Dermatitis Venenata. Redness, swelling, and heat, followed or attended by the formation of a vast number of small, closely crowded vesicles that may remain isolated or run together and form bullæ, are the symptoms that constitute this form of dermatitis, the cause of which is always some sort of irritant applied to the skin. The irritant is usually of a chemical nature, and quite commonly is derived from plants.

Rhus-poisoning. The most frequent cause of dermatitis venenata is contact of the susceptible skin with the leaves of the rhus toxicodendron, the poison-ivy, and the rhus venenata, the poison-sumach, and the rhus diversiloba, the poison-oak. Dr. James C. White,[2] of Boston, has written a most complete and learned work on the subject, and it is to this that the reader is referred for a more detailed account of the disease than can be given here. The mildest degree of irritation is an erythema. Commonly the reaction is more marked. The patient first experiences a little burning or itching, and attention being drawn to the part it is found to be reddened and swollen. In some cases we may have wheals. In a few hours papules, then vesicles, will form and perhaps bullæ. The swelling may be intense, so as, on the face, completely to close the eyes. I have seen it so great on the scrotum as to give the appearance of an immense hydrocele. The vesicles may be present in a countless multitude. The acute developing symptoms may last several days, and then gradually subside. The vesicle contents either dry up or discharge upon the skin. The parts crust, the swelling and redness slowly disappear, and the skin once more becomes normal. When the dermatitis is due to the poison-ivy the cause of the trouble is supposed to be toxicodendric acid. The parts most usually affected are the hands and face in both sexes, the penis in

[1] Monatshefte f. prakt. Dermat., 1888, No. 21.
[2] Dermatitis Venenata. Boston, 1887.

the male and the breast in the female—that is, those parts that come in direct contact with the poison, or to which it is most liable to be conveyed by the hands. In some rare cases, and in extremely sensitive individuals, the whole body may be affected, and there may be grave constitutional disturbances. These bad cases are met with in chil-

FIG. 21.

Dermatitis venenata from poison-ivy.[1]

dren whose legs are uncovered. Most persons, perhaps, are not susceptible to the poison. Some few are so susceptible that even having the wind blow on them from over one of the plants will cause the dermatitis.

It is probably not true that the dermatitis will relapse after an interval of time, but it has been observed that an

[1] From a photograph by Dr. H. W. Blanc, of New Orleans.

eczema may follow the dermatitis, and that this may show a certain amount of periodicity in its outbreaks. White says that while the poison may be most active in the flowering season, it is sufficiently active at all seasons, and that the poison resides not only in the leaves, but also in the wood, bark, and fruit. The disease is not contagious after the parts have been well washed.

Diagnosis. The eruption differs from that of *eczema* in seeking the inner sides of the fingers, the hands, face, breasts, and genitals; in the greater amount of swelling that commonly attends it; in the vast number of crowded together, "lurid" vesicles; and in the occasional occurrence of the eruption in its early stage in streaks, suggestive of striking against the plant. A history of having been in the country will sometimes be an aid in diagnosis.

Erysipelas of the face sometimes needs to be differentiated. If the hands or genitals are affected at the same time with the face, that will decide in favor of dermatitis venenata. Besides this, erysipelas almost always is attended by constitutional disturbance and it spreads with a raised border.

Treatment. The disease is a self-limited one. It is, therefore, natural that there are many "sure cures" for it, and nearly every section of the country has some popular remedy. A saturated solution of bicarbonate of sodium, that can be procured anywhere, will afford relief as promptly as anything. The parts are to be kept constantly covered with lint or absorbent cotton continuously saturated with it or with lime-water. At night we cannot use this if the patient sleeps, as the cotton or the lint dries. So it is better at this time to use some simple ointment, as cold cream, oxide of zinc, or diachylon diluted one-half, the last being the best. This treatment commends itself on account of its efficacy, cheapness, safety, and accessibility. Ichthyol in aqueous solution from ten to forty per cent. strength is highly commended by some. White recommends black wash (calomel, ʒj; aq. calcis, Oj), applied for half an hour at a time, two or three times a day. He cautions against the danger of using it in extensive cases. As a substitute for it he gives:

℞	Zinci oxid.,	ʒiv;	16	
	Ac. carbol.,	ʒj;	4	
	Aq. calcis,	ad Oj;	ad 500	M.

Sugar of lead in solution is a well-known remedy, and is efficacious but dangerous. Morrow[1] recommends:

℞	Sodii hyposulphitis,	ʒj;	25	
	Glycerini,	ʒss;	12	
	Aquæ,	ad ʒviij;	ad 200	M.
S.	Keep constantly applied.			

After the acute stage has passed the case should be treated like an eczema. If the constitutional disturbance is marked, the patient should be cared for upon general medical principles.

While the poison-oak, or ivy, causes the symptoms most often spoken of as dermatitis venenata, there are a number of other plants that will produce like, if not so severe, symptoms. Of the commoner ones we find the oleander, Jack-in-pulpit, skunk cabbage, bitter orange, May-apple, arnica, burdock, golden rod, and common daisy. But space will not allow of a complete list of these. Goa powder and its derivative, chrysarobin, produce a marked dermatitis in addition to the mahogany-staining of the skin. The action of croton oil, mustard, stinging-nettle, and oil of turpentine is well known. Tar may excite a general dermatitis or an acne-like inflammation of the follicles called "tar acne," the follicles of the skin being stopped up and their mouths filled with a black plug of tar. A somewhat similar eruption is seen in workers in flax and paraffin. Workers in picking and packing peaches may have an eczematous dermatitis developed upon the wrists, forearm, neck, and upper part of the chest.

A great number of chemicals produce dermatitis of varying degree. Pyrogallic acid produces burning and inflammation, and covers the part with a black coating on account of its oxidation. Not only does it destroy diseased tissues, but it may cause also sloughing of the sound skin. Chloroform will blister if prevented from evaporat-

[1] Journ. Cutan. and Ven. Dis., 1886, iv., p. 180.

ing. This peculiarity is sometimes employed for vesication. The strong acids destroy the skin, as also arsenic. Sulphur, iodine, iodoform, creolin, mercurial preparations, chloride of zinc, bichromate of potash, and caustic potash cause varying degrees of dermatitis. Electricity will redden and inflame the skin, and not a few cases of dermatitis have resulted from wearing clothing dyed with aniline dyes.

Dermatolysis. Synonyms: Chalazodermia; Cutis pendula; Pachydermatocele.

This term is applied to two entirely different diseases of the skin. In one we have folds of loose, thickened skin and subcutaneous tissue that sometimes form huge masses hanging down from the side of the face, trunk, or any part of the body. The skin is soft, and does not appear altered, excepting that it is pigmented to a certain extent. This form is really a species of fibroma. True dermatolysis is a yet more rare affection, in which, owing to some defect in the attachments of the skin, it can be pulled away from the body like the skin of a cat. The "Elastic-skin Man" is an instance of this. There have been several of these freaks. The one mentioned could pull the skin from his chest up to his eyes. The condition is congenital, but can be increased by cultivation. There are no other changes in the skin itself.

TREATMENT. The treatment of the first variety is by excision before it becomes too large.

Dermatomycosis Furfuracea. See Chromophytosis.

Dermatosclerosis. See Scleroderma.

Dermatosis Kaposi. See Atrophoderma pigmentosum.

Dermatosis Linearis Neuropathica. See Papilloma lineare.

Dermographia. See Urticaria factitia.

Desmoides. See Fibroma.

Diabetic Eruptions. According to Brocq, they may be [illegible]o two great classes: 1. Those in direct rela-

tion to alterations in the general economy, such as pruritus, chronic papular urticaria, acne cachecticorum, erythema, lichen, eczema, herpes, ecthyma, furuncle, carbuncle, xanthelasma, gangrene. 2. Dermatoses due directly to the contact of the secretions of the body charged with sugar, and more especially the eczema of the genitals caused by contact with the urine.

Kaposi[1] has described a bullo-serpiginous gangrene of diabetics which begins as a disseminated eruption of bullæ upon the extremities. The bullæ dry up in the center into a black crust, while at the periphery there is a ring of fluid pushing up the epidermis. When the crust is removed sphacelated skin is exposed, which separates and leaves a red, granulating surface. The penis is a favorite site for this form of gangrene. It must be treated on general surgical principles.

Distichiasis. This is a congenital or acquired condition of the cilia, in which they grow in two distinct rows, the inner row being directed inward so as to scrape the cornea. According to Michel, generally the outer third of the upper lid is affected alone, the deformity is symmetrical and bilateral, and of embryonic origin. Electrolysis offers the best method of relief. These cases belong to the ophthalmic surgeon.

Dracontiasis. See Guinea-worm disease.

Durillon. See Callositas.

Dysidrosis. See Pompholyx.

Dystrophie papillaire et pigmentaire. See Acanthosis nigricans.

Ecchymomata and **Ecchymoses.** See Purpura.

Ecdermoptosis (Huguier). See Molluscum epitheliale.

Ecphyma Globulus is described by H. L. Purdon[2] as a contagious disease occurring in Ireland. It begins as a tubercle which, after a time, softens and is replaced by a

[1] Wien. med. Presse, 1883.
[2] Dublin Journ. Med. Sci., 1897, ciii., 486.

raspberry-like tumor. All parts of the body may be affected excepting the hands and feet. It is chronic in its course, but can be cured by applications of the nitrate of silver.

Ecthyma. Synonyms: Furunculi atonici; Phlyzacia agria; (Ger.) Eiterpusteln; (Fr.) Furoncles antoniques; (Ital.) Rogna grossa.

A cutaneous eruption of deep-seated pustules, with hard, elevated, reddened bases, attended by the formation of thick, greenish or dark-colored crusts, and followed either by cicatrices or dark pigmented spots.

Symptoms. Most if not all cases of so-called ecthyma are either pustular eczema, or more probably a contagious disease allied to if not identical with impetigo contagiosa. As usually described, the disease consists in the outbreak of one or more round, flat pustules, whose covers are not fully distended, and which have an inflammatory areola. In size they vary from that of a split pea to that of a finger nail, or larger. At first they are white or yellow. Subsequently they may or may not become reddish from the admixture of blood. They may dry up, forming a crust, which, on falling, leaves a healthy surface. Or they may rupture spontaneously or be broken, and form a thick, greenish or blackish crust, under which is a raw or superficially ulcerated surface, which on healing leaves a pigmented or slightly cicatricial spot. In subjects in bad hygienic surroundings quite deep ulcers may result. These pustules are usually discrete, but they may group. They are both painful and tender. Any part of the body may be affected, but they are most often seen on the extremities, especially the legs, where the hair is coarse, the shoulders and the back. The course of the disease may be acute, each pustule lasting five or ten days, and the whole disease lasting about two weeks; but generally it is chronic, and kept up by the outbreak of fresh crops. There is more or less itching, soreness, and pain. It is both contagious and auto-inoculable. Febrile symptoms may accompany or precede the outbreak of the disease, but as a rule they are absent.

ETIOLOGY. Dirt, want, bad hygienic surroundings, the strumous diathesis, or a broken-down, cachectic condition brought on by intemperance or dissipation, all predispose to the disease. It is quite often seen in the genus "tramp." It follows, not infrequently, upon scratching on account of pediculi and scabies. It is most often seen in adults, and is rare in children. Like in all other purulent diseases, pus cocci, both staphylococci and streptococci, are found in the pus, and are the contagious element in the disease which is carried from place to place to produce new foci of infection.

DIAGNOSIS. Ecthyma differs from *eczema* in having much larger and deeper pustules, which are discrete and not confluent, in the marked areola about the pustules, and in the absence of all other signs of eczema. It differs from *impetigo contagiosa* in its pustules being deeper; in their location upon the extremities rather than upon the face and hands; in not having that flabby, bullous look of a burn of the second degree, so common to impetigo; in having thick greenish or blackish crusts, and not straw-colored stuck-on crusts; in occurring in more or less debilitated adults and not in otherwise healthy children. But all these alleged differences can be readily explained away by the difference in the character of the soil on which the contagious principle is implanted. Ecthymatous pustules are often seen in connection with impetigo contagiosa. From *impetigo* it differs principally in its being a deeper and more inflammatory process, and in occurring in debilitated subjects. It resembles the *large, flat, pustular syphiloderm;* but its crusts are not heaped up into oyster-shell-like masses, as in syphilis, and when they are removed they leave a more superficial, and not so punched out an ulcer. There are more pain and itching in ecthyma, and an entire absence of other symptoms or history of syphilis. It differs from *furuncle* in having no central core, and in not being so deep a lesion nor so painful.

TREATMENT. The first thing to be done in these cases is to obtain cleanliness, proper hygienic surroundings, and complete abstinence from alcoholics. If there is a general

debility, tonics must be given and the dietary improved. Locally, all crusts must be removed with soap and water, the lesions dressed with an ointment containing some antiseptic such as—

℞ Hydrarg. ammon., ℈j; 5
Ungt. zinci oxidi, ℥j; 100 M.

and the parts enveloped in a bandage, where such can be applied. An ointment or oil containing ten or fifteen grains of salicylic acid to the ounce will also answer well. If ulcerations have formed, they should be treated as will be indicated under Ulcers.

Ecthyma infantile gangréneux. See Dermatitis gangrænosa infantum.

Ecthyma terebrant de l'enfance. See Dermatitis gangrænosa infantum.

Eczema. Synonyms: (Fr.) Dartre vive, ou humide, eczéma; (Ger.) Ekzem, Hitzblätterchen, Flechte, nässende Flechte, Salzfluss; Salt rheum, Tetter, Humid tetter, Scall, Scald, Heat eruption.

A non-contagious, inflammatory disease of the skin, sometimes acute, more often chronic, attended with itching, desquamation or loss of the cuticle, and usually with the exudation of serous or sero-purulent fluid either beneath the cuticle or upon the denuded surfaces. It may present erythema, papules, vesicles, or pustules, and its lesions show a decided disposition to run together and form infiltrated patches.

Symptoms. This is a most protean disease. It has been well said that if a student learns to recognize and treat syphilis and eczema, he has possession of the key to the whole of dermatology. There are six prominent symptoms of the disease:

1. Redness.
2. Itching.
3. Infiltration.
4. Tendency to moisture.
5. Crusting or scaling.
6. Cracking of the skin.

In every case there will be four or five of these symptoms; or perhaps all of them.

Eczema begins suddenly, and most often without any constitutional disturbance. Should slight fever and malaise be present, they are accidental, or an expression of that condition of the system that predisposes to the disease, and not part of the disease itself. Very often the first thing that attracts the patient's attention is itching, and when he examines the skin he finds it reddened, and either scaly or covered with papules, vesicles, or pustules; or moist.

The tendency of eczema in all forms is to form patches, which are infiltrated to a greater or less extent; ill defined; shade off imperceptibly into the surrounding skin, so that it is hard to say where they end, with outlying lesions about them; irregular in shape; of all sizes, sometimes involving nearly the whole cutaneous surface; sometimes swollen, and of dark-red color; sometimes with a shade of yellow. Beginning by a few lesions, the disease increases more or less rapidly in extent, and it is by the running together of the individual lesions that the patches are formed. It may clear away after a short time, or it may last weeks or months, or become chronic, showing little tendency to recovery. There is no constant rule as to the course of the disease, though many cases occur and recur at certain seasons of the year; it may be in the summer, spring, autumn, or winter. Any or all parts of the skin may be affected, but it has a predilection for the flexures of the joints, the face, the scalp, and the sulcus behind the ear. There may be but a single patch or many patches. It commonly affects both sides of the body, but with no marked symmetry.

The subjective symptoms are itching, burning, and a feeling of heat and tension. Of these, the most constant is itching, which is present in all cases, and is often so great as to cause the patient to excoriate the skin by scratching. It is subject to exacerbations and remissions. The latter may be complete or incomplete. Burning and tension are experienced for the most part only at the

beginning of the attack or during some exacerbation of a subacute or chronic case.

The old definition of the disease was that it is a vesicular one. It is well to disabuse the mind of this impression at the start, as there is a form of the disease that is dry throughout—the erythematous form. There are five forms of eczema, known as the erythematous, papular, vesicular, pustular, and squamous. Eczema madidans is but a convenient term to describe a very moist eczema. Eczema rimosum or rhagadiforme is but an eczema in which there is cracking of the skin, especially about the joints.

Before discussing each of these forms by itself, it is necessary to understand that no one of them, excepting perhaps eczema erythematosum, is clear cut and unchanging. On the contrary, the disease may begin as a papular erythema; upon the papules vesicles may form, which will run together and soon break down of themselves and form a weeping patch; the subsequent lesions may then be pustules, and the final stage through which all varieties pass before recovery is the squamous. Now we are ready to study each variety by itself.

Eczema erythematosum is most often encountered upon the face of an adult, though it may occur elsewhere and in children. Beginning as one or more ill-defined red patches, it soon forms a continuous patch by the coalescence of the smaller ones. Sometimes the whole face is involved, sometimes there are several patches. The inflammation is often attended by œdema to such an extent that the eyes are nearly closed if the disease is in their neighborhood. The patient experiences great discomfort on account of the itching and the burning and stiffness of the skin. The skin feels harsh, dry, and thickened; it is swollen; its color is bright or dull red; there are a slight amount of small adherent scales and many small excoriations. If it occurs on contiguous folds of the skin, there may be moisture. Upon the face vesicles and papules may develop, but they are exceptional. After lasting for a time the symptoms may subside and recovery take place, the patches fading away altogether and not in the center alone. It may assume a chronic form and last for years. It is

seen at times upon the body in the form of very superficial, pale-red, scaly, round, circumscribed patches, and constitutes one form of the so-called parasitic eczema.

Eczema papulosum. This is the lichen simplex of the old writers. It consists in an eruption of pin-point to pinhead-sized, bright or dull-red, acuminate, discrete, grouped, or perhaps confluent papules. They are often in relation to the hair follicles. Very frequently the papules are capped by vesicles. The papules may remain discrete throughout their course, with an occasional small confluent patch to betray the nature of the disease. These patches are frequently no larger than a silver dollar in size and fairly well defined. This is one of the most itchy varieties of this pruriginous disease, and the scratching consequent upon it produces excoriations, and, breaking down the vesicles and papules, gives exit to the serum and converts the patch into a moist one. This variety is located preferably on the extensor aspects of the limbs. The life of the individual papule is comparatively long—days or weeks. It is often obstinate to treatment.

Eczema vesiculosum is the most common and most characteristic form, and consists in an eruption of pin-point to pinhead-sized, rounded or acuminate vesicles that appear upon a reddened surface in immense numbers. Prickling and tingling precede the outbreak; intense itching and more or less swelling attend it. The vesicles group, and perhaps coalesce, and soon rupture of themselves, and discharge a clear, sticky, mucilaginous fluid that possesses the quality of stiffening and staining linen, and dries into a light-yellow crust. The vesicles rupture so early that it is rare for the physician to see a case with the vesicles intact. New vesicles form about the patch, and break down; the discharge continues from the sites of the vesicles, and the crust continuously forms. A raw surface is exposed when the crusts are removed. Sometimes when the crust is prevented from forming on account of friction, there is a weeping surface, which has been called *eczema madidans* or *rubrum.* Eventually the discharge ceases, the hyperæmia lessens, scaling takes place, and after a time the skin returns to its normal condition. This form of eczema

seeks the soft parts of the skin, the flexures of the joints, the flexor surfaces of the limbs, and behind the ears. It may involve the whole or nearly the whole cutaneous surface. After it has lasted a little while in a part the skin is evidently thickened. With it papules and pustules very generally are found.

Eczema pustulosum. Like the pustular syphilide, this form of eczema occurs in more or less broken-down, cachectic, delicate, or strumous subjects. It is the most common form of eczema met with in children, and in them occurs by preference on the face and head. The eruption consists of small pustules that may start as pustules or develop from vesicles. They are present in large numbers, and tend to break down and form patches covered with greenish crusts. If blood is drawn by scratching, the crust will be blackish. They are somewhat larger than the characteristic vesicles, and have a fondness for hairy parts, though any part of the body may be affected. This and the previous form often merge into each other. It may develop from any of the other forms of the disease on account of infection by pus cocci. It is not so itchy as the other forms. It may change into an eczema madidans, and it passes through the squamous stage on the way to recovery. While the above described forms of eczema are in some cases fairly well marked, in very many cases several forms will be present at the same time. Thus we may see erythematous patches here, while there vesicles may form which change into pustules, while scattered about are numerous papules.

Eczema squamosum is the final stage through which all cases pass on their way to recovery. In it the skin is dry, red, and covered with thin, papery, flat, large or small scales. It is a condition of the skin in which the formation of its corneous layer falls short of perfection. The disease may continue in this condition for an indefinite time, a chronic eczema with occasional exacerbations. Then it may pass away entirely and the skin become quite well; or some local injury may cause an acute outbreak of eczema. The skin in this form is more or less thickened, and deep cracks are liable to form about the joints, be-

cause the infiltration of the skin interferes with its elasticity, and it breaks instead of stretching when the joint is extended. While the patches are usually ill defined, in some cases they will be round, and with well-marked borders. This form is spoken of as *orbicular* eczema.

Eczema may be *acute*, *subacute*, or *chronic*—terms that apply not to the length of time that the disease has lasted, but to the symptoms it presents. In *acute* eczema there are the usual signs of inflammation—heat, redness, and swelling. There may be constitutional symptoms of fever, chills, prostration, and the like, in this stage. This stage is usually of short duration, and passes over into the *subacute* stage. Now the swelling lessens or disappears, but there is an active evolution of lesions, papules, vesicles, or pustules, as the case may be. After a time the *chronic* stage is reached, when the disease takes the form of reddened, infiltrated, scaly patches. It is prone to take on acute symptoms under slight irritations. In severe attacks of eczema the patient may be confined to bed and greatly prostrated. In the great majority of cases, while the patient suffers much discomfort, he does not feel ill. It predisposes to ulceration upon the legs when combined with varicose veins, and then is named *eczema varicosum*. This must not be confounded with a somewhat similarly sounding name, *eczema verrucosum*, which is a rare form, in which the skin takes on a warty appearance on account of a hypertrophy of the papillæ.

Etiology. Like its symptoms, its causes are numerous. It may arise from purely *local causes*, but even then it is probable that we should assume in most cases a predisposition on the part of the skin. Thus, we have eczema of the hands in washerwomen. Perhaps for a score of years they had washed in the same water and with the same soap without eczema. Then under the same local conditions, but with some unknown internal constitutional state, an eczema breaks out. Of external irritants, we have the sun, water, intense artificial heat, acids, alkalies, traumatism, rubbing of apposed surfaces or chafing by the clothing, parasites—in fact, just the same things as will cause a dermatitis, only now the action goes further,

and a catarrhal condition of the skin results. Cold has an undoubted influence on the skin, and eczema is more common in winter than in summer, and is generally aggravated by extremely low temperature, even when the patient keeps in the house. It has been observed that children with eczema grow worse when it is cold and a high wind is blowing, even though they are not exposed directly to these conditions. Vaccination may act as a local cause.

Of the *internal* or *predisposing* causes, perhaps the most common and active is some digestive or intestinal disturbance—it may be dyspepsia or malassimilation, or derangement of the liver, or constipation. At other times the kidneys are at fault. Diabetes and Bright's disease both predispose to eczema. Chlorosis and anæmia, uterine disorders and the menopause, and the strumous diathesis are at times active factors. Derangements of the nervous system are exciting causes; now and again we meet with cases which appear suddenly after some nervous shock. Rheumatism and gout and varicose veins are other predisposing causes. To most of these internal causes some external irritation must be added before the eczema appears.

The French school of dermatology has long held to its theory of diathesis, and has taught that the dartrous diathesis is the cause of eczema. Outside of France little is known about diathesis. A vulnerability of the skin is necessary for the production of an eczema, and many patients may fairly be regarded as eczematous, just as others may be spoken of as gouty, or rheumatic, or psoriatic. This peculiarity or tendency of the skin may be inherited, and in so far eczema may be regarded as hereditary.

The disease occurs in all ages, conditions, races, and both sexes, and is the dermatosis we are most often called upon to treat. It is especially common in children. In Bulkley's tables, out of 3000 cases, 676 occurred under five years of age; and of these, 520 were in children under three years. Of the remaining cases, 1234 were between the ages of twenty and fifty, and were divided about equally in each decade. About one-third of all skin diseases are eczema.

These many etiological factors indicate that it is probable that our present eczema is a too composite disease, and it is for this reason that attempts are constantly made to take away certain members of the family and form them into separate diseases. Unna and others have asserted of late that a parasite, yet undetermined, is the cause of one variety of eczema, his eczema seborrhoicum. Thus far no micro-organism has been demonstrated as the cause of the disease, though the pus cocci are found in the pustular form. They are doubtless often the cause of the pustulation, which may be a matter of secondary infection. Unna further teaches that there are two other varieties of the disease, one due to reflex nervous irritation, such as is seen during dentition of infants, and one dependent upon the tubercular diathesis.

PATHOLOGY. Eczema is a catarrhal inflammation of the skin, analogous to that of the mucous membrane, which has its seat principally in the papillary layer of the skin and in the rete. This superficial location of the disease is the reason why the skin is left unmarked after the disease has been recovered from. In chronic eczema there is marked cell infiltration of the corium, producing the characteristic thickening of the skin. The subcutaneous tissues may be affected by this infiltration. A trophoneurosis is supposed by many to be the cause of the disease when not due to local irritants, and Crocker quotes Marcacci as having found changes in the sympathetic in a fatal case of universal eczema.

DIAGNOSIS. If the six prominent symptoms of eczema are remembered, namely, redness, itching, infiltration or thickening, exudation or tendency to moisture, crusting or scaling, and cracking, it will be a great aid in diagnosis. To them should be added the tendency the disease evinces to locate in the folds of the joints, between apposed surfaces of skin and behind the ears, and the peculiar mucilaginous quality of the exudate, which stiffens and stains linen and glues the hair together. Fortunately, a diagnosis of eczema will fit one out of every three cases. Here will be given the general diagnosis, reserving for the sections on regional eczema the diagnosis of special forms where necessary.

Dermatitis is often distinguished with difficulty from eczema, and frequently passes over into it. As a rule, it runs a more rapid course, its vesicles are longer preserved, bullæ are apt to form, there is burning rather than itching, and it heals readily on removal of the cause.

Dermatitis exfoliativa is, when fully developed, a universal eruption, while eczema is very rarely so. It is also dry, and has abundant large scales; while eczema will exhibit moisture somewhere, and does not scale so abundantly. For further points in diagnosis, see under Dermatitis exfoliativa.

Erysipelas is attended by fever and marked constitutional disturbances, has a sharply defined border, advances steadily at its margin, and forms a swollen, deep-red patch upon which large vesicles and bullæ form. The margin of eczema is ill defined, fading off into the surrounding skin; its vesicles are pin-point- to pinhead-sized; itching is always present; and there is little or no constitutional disturbance. Eczema has a dry, rough surface in the erythematous form, while erysipelas has at first a smooth and shining one.

Erythema burns rather than itches; its redness can be entirely squeezed out by pressure, leaving a whitish spot, and returns promptly when the pressure is removed. In eczema pressure will cause the redness to disappear, but it will leave a yellow stain in its place. Erythema lacks the itching, exudation, scaling or crusting, and cracking of eczema, is prone to appear upon the back of the hands and wrists, and is symmetrical.

Herpes febrilis resembles eczema only in having vesicles upon a red surface. It occurs usually in a single patch upon the face; its vesicles are discrete, and show little tendency to run together; its course is short, and it pains or burns, but does not itch.

Zoster occurs in the form of a number of herpetic patches following the course of a nerve, and occupying only one side of the body—symptoms that are entirely foreign to eczema.

Impetigo contagiosa occurs for the most part upon the face, hands, and exposed parts. Its pustules are large,

flat, and discrete, not small and conglomerate. Its crusts are thin and stuck on; not greenish and thick, as in eczema. It is a vesico-pustular disease, and often presents large vesicles or bullæ that look like burns of the second degree.

Lichen planus presents papules that are flat, smooth, umbilicated, and angular, and has a peculiar violaceous hue when its lesions are sufficiently numerous to simulate eczema. Eczematous papules are round and acuminate and bright red. They are constantly coming and going, while those of lichen planus are constant and last for considerable time.

Lupus erythematosus occurs in sharply defined patches which are exceedingly chronic; its scales are adherent; its color is peculiar; and it produces atrophy of the skin. Eczema presents none of these symptoms.

Mycosis fungoïdes in its early stage is often indistinguishable from eczema. Usually its patches assume a half-moon, horseshoe, or kidney shape. These may disappear, to reappear in the same or other locality. They also fail to respond to treatment. The diagnosis is at times difficult until the characteristic elevated patches appear.

Pemphigus foliaceus presents raw surfaces that bear some resemblance to eczema rubrum; but its large bullæ and pastry-like crusts, coupled with the generally bad condition of the patient, sharply differentiate it.

Phthiriasis, or pediculosis, shows paralled scratch-marks over the shoulders and excoriations about the waist and on the limbs where the seams of the clothing come. If on the head, the lesions will be on the occiput, and nits will be found on the hair of that region or of the temples. The eruption to which they give rise *is* an eczema, but the cause of it is evident.

Pityriasis rubra pilaris has elevated papules about the hair follicles of the back of the fingers, and is not particularly pruritic. It forms well-defined patches that feel like nutmeg graters and present no secondary changes.

Pruritus cutaneus has no lesions, properly speaking, and the excoriations met with are not in patches, but scattered all over the body at intervals and irregularly. The itching is more paroxysmal than it is in eczema, and the

itching is the only symptom that it has in common with eczema.

Psoriasis, when occurring in typical round or oval, sharply defined patches, with silvery scales, offers no difficulty in diagnosis from a typical eczema. From circumscribed eczema, that occurs occasionally, it may be diagnosticated by the color—of a brighter red; by the scaling, that is whiter, thicker, and more laminated; and by finding characteristic patches either of the one or the other disease elsewhere on the body. When psoriasis occurs in large areas it is diagnosticated from squamous eczema by its sharply defined border; its marginate form; its brighter red; its more abundant, thicker, and whiter scales; its fondness for the extensor surfaces of the limbs, while eczema seeks the flexor aspects and the flexures of the joints; its uniform character and constant dryness, against the polymorphous character of eczema and its moisture; and its history of frequent relapses, always of the same sort and always on the elbows and knees.

Rosacea occupies the middle third of the face from above downward, attacking the forehead, nose, and chin; while eczema affects the whole or part of the face, but never occurs on these limited regions alone; it burns rather than itches; it shows telangiectases, and its redness and occasional discrete, sluggish, superficial pustules are very different from either the dry, harsh, scaly redness of an erythematous eczema, or the crusted surface of a pustular eczema.

Scabies may be diagnosticated from eczema by its location upon the anterior surface of the wrists, between the fingers, and upon the abdomen and buttocks of both sexes, and upon the nipples and breasts of women and the penis of men. In children the feet are often affected. The presence of cuniculi is diagnostic, but they are hard to find in some cases. Of course, the eruption in scabies is an eczema; but it is important to recognize, where possible, the cause of an eczema in order to cure it.

Syphilis, like eczema, is a protean disease; but it does
and that is an important point in differential
It is true that occasionally a papular or crusted

pustular syphilide does itch, but the occurrence is so rare that it need not here be taken into account. The early syphilides are general eruptions, whether macular, papular, or pustular, and the efflorescences never form patches, though they may show more or less grouping. When the other symptoms of syphilis are present, such as the initial lesion, mucous patches, and alopecia, there can be no difficulty. It is the later manifestations of the disease that offer difficulties in diagnosis, and especially the grouped papular lesions that occur on the palms in the form of scaly patches. In some cases a diagnosis is impossible. The most suggestive symptom of syphilis is the occurrence of the disease upon the palm of one hand alone. The patch will have a wavy outline; will be scaly, but not moist or crusted; will often show healthy skin in the middle; and there are apt to be isolated, scaly, dark-red papules somewhere in the neighborhood. The finding of scars of old lesions, or some other evidence of syphilis, will aid us.

Trichophytosis corporis when in disk-shaped patches that have not formed rings bears at times so close a resemblance to eczema that it is difficult to make a diagnosis at once; but in a short time the center of the disk will clear up and the annular ringworm patch will declare itself. Eczema does not have annular patches.

Urticaria, when it has induced itching and has been scratched, looks like an eczema. We recognize it by the finding of the wheals, or the history of them, and by the isolated, scattered distribution of the excoriations and papules. Some cases of papular urticaria can only be diagnosticated after prolonged observation.

TREATMENT. While not a few cases of eczema arise from purely local causes, and require only external treatment, in most cases the patient is not in good condition, and he needs treatment quite apart from his skin disease. It is well for us to begin the treatment of a case by regarding it as one of a sick man rather than a sick skin. The better practitioner of medicine a man is, the better his chances of curing eczema will be. It is not the part of the writer on matters dermatological to instruct his readers

in general medicine, and here I can give only an outline of the treatment proper to be followed.

If the patient is anæmic, we should administer iron, and see that he has plenty of fresh air and a sufficient amount of exercise. If he is run down, and especially if he is of a strumous habit, cod-liver oil will be indicated. To the nervous patient, strychnine, hypophosphites, and other nerve tonics should be administered. The dyspeptic needs mineral acids, nux vomica, pepsine, or bismuth and soda, according to the different form the trouble takes. Those suffering from uterine diseases need the treatment best suited to their case. The gouty and rheumatic will be benefited by alkalies, such as the acetate of potash or the phosphate of soda. Colchicum will be useful in gouty cases. In fact, there is no specific for eczema, and each case should be studied and treated by itself.

But nearly every case requires attention to the diet and exercise, and to the proper action of the bowels and kidneys. The diet is of special importance. Piffard[1] has found that 56 per cent. of his cases of eczema have been carnivorous —that is, eating meat three times a day and but little bread and vegetables; 40 per cent. omnivorous, and but 4 per cent. herbivorous. Many of the patients eat too much and exercise too little. Many suffer from distress of stomach after eating certain articles. Some eat too little, and that of improper sort. The indications for treatment are therefore obvious. The greatest difficulty we have to contend with is the objection most people have to dieting of any sort.

In an acute eczema of any considerable extent it is always best to put the patient on a restricted and simple diet, and of these, where milk is well borne, a milk diet is the best. Two or more quarts of milk may be taken during the day in divided doses, with dry toast or toasted crackers. After a few days a more liberal diet may be allowed, as in subacute and chronic eczema.

In subacute and chronic eczema meat should be taken but once a day, and should be beef, mutton, or chicken, and should be eaten in the middle of the day when pos-

[1] Medica and Therapeutics of the Skin. Wm. Wood & Co., 1.

sible. Breakfast and supper should be very simple, of crackers and milk, bread and milk, or some of the grains well cooked and eaten without sugar. There is a popular idea that oatmeal is injurious. It is best to forbid its use. Fish may be allowed, but not those with dark meat or oily. An occasional egg may be eaten in the morning, but not every day. No pastry, cake, or confectionery should be allowed. Apart from absolute simplicity, the patient's taste may be consulted, care being taken to avoid anything that he knows will disagree with him. It is a good rule to tell the patient that he may eat what he likes, but not of more than three dishes at a meal. It is unlikely that he will then overeat. Those who eat too little for any reason should be directed to take that little more often during the day. Butter may be taken freely. The dyspeptic should drink a cup of *hot* water about a half-hour before meals. It is sometimes necessary for a time to resort to kumyss or matzoon, and artificially digested food, but the sooner he can return with comfort to a more natural diet the better. Fried and warmed-up meats should be avoided in all cases. Fruits fully ripe or stewed can as a rule be liberally partaken of.

All alcoholic drinks must be absolutely forbidden. Malt liquors are especially obnoxious to all irritable skins. Tea, coffee, and chocolate are best let alone. Coffee, one small cup, may be allowed for breakfast; or cocoa, which is better, if made with a good deal of milk. Milk, if it does not constipate, may be allowed, but not with the regular meals. Water should be drunk regularly, and it is not unlikely that much of the benefit derived from visiting foreign spas is on account of the regular drinking of water. A good rule is for the patient to drink a glass of water before meals, while dressing, a glass of water or other fluid at each meal, a glass of water about two hours after meals and before going to bed. If preferred, bottled table waters may be used. Vichy water may be substituted for plain water once or twice a day. Tobacco is harmful in some cases.

Enforcement of these dietary laws will in many cases overcome constipation. It is best not to resort to medicines

to procure a good daily movement of the bowels, if it can be avoided. Kneading of the bowels when in a recumbent position will often stand us in good stead, the bowels being steadily and deeply rubbed with the heel of the hand, starting in the right groin, and following the course of the large intestine upward, across, and downward. The habit of going to stool at a regular hour of the day should be formed, and it should be seen to that the bowels act promptly. If we must needs give medicine, the tablet triturates of aloin, belladonna, and nux vomica; the pill of iron and aloes; the extract of cascara sagrada, with or without nux vomica, which may be administered in capsules or as compressed tablets to avoid the disagreeable taste; Startin's mixture—

℞	Magnesii sulphatis,	ʒvj–ʒjss;	20–30	
	Ferri sulphatis,	ʒj;	3	
	Ac. sulphur. dil.,	ʒij;	6	
	Syr. pruni virgin.,	ʒj;	24	
	Aquæ,	ad ʒiv;	ad 100	M.

Sig. A teaspoonful through a tube, after meals.

or any other serviceable remedy may be given. Hardaway recommends the phosphate of sodium, a teaspoonful in hot water before breakfast, or three times a day, for lithæmic patients who are constipated. This is an excellent laxative for children, a little of it being put into their milk, to which it gives a hardly noticeable salty taste.

Exercise in the open air is as necessary for eczematous patients as for any other class. It should not be taken so as to cause over-fatigue. Patients with eczema on the face and hands, or with a tendency thereto, should always wear gloves during the cold seasons, and should always protect the skin of the face by a little powder, calamine lotion, or cold cream before going out into the cold, or storm of wind or rain.

Though there is no specific for eczema, there are certain drugs that have acted favorably upon the disease in the hands of some observers. *Arsenic* has come down from old with a reputation for curing eczema, and is largely prescribed. It had best be let alone. It is only of benefit in

chronic scaling cases, and in only a few of them. It may be used in the form of Fowler's solution (liq. potassii arsenitis), giving from two to five minims well diluted, three times a day, after meals; or as arsenious acid, in tablet triturates, either with or without pepper, dose $\frac{1}{60}$ to $\frac{1}{30}$ grain. The *wine* of *antimony* in five-minim doses, three times a day, has been warmly commended. *Phosphorus*, $\frac{1}{100}$ to $\frac{1}{25}$ grain, either in pill or in oil, has been found useful in long-standing eczema. Piffard speaks well of an infusion of *Viola tricolor* in acute or chronic eczema capitis, especially in lymphatic children. It is made by putting one or two drachms of the imported herb into a bowl, pouring a pint of hot water over it, and covering with a plate. When cool, it is to be taken in divided doses during the day. After a few days it generally aggravates the disease, a good thing to accomplish in chronic cases. It is then to be discontinued for a few days or a week. In acute cases the dose should be quite small. In infants one drop two or three times a day is often sufficient. Adults may take as much as a teaspoonful in chronic, sluggish cases. *Turpentine*, the spirits, is recommended by Crocker in obstinate cases. It is given in an emulsion with mucilage, three times a day, after meals, the dose being ten minims at first, and then, if tolerated, increased by five-minim doses up to twenty or thirty minims. While it is being taken not less than a quart of barley-water should be drunk, and the last dose should be taken not later than six o'clock in the evening. The same author recommends *counter-irritation* over the spine, the nape of the neck for eczema of the upper half of the body, and over the last dorsal and first lumbar vertebræ for the lower half. Dry heat, a mustard-leaf, or liquor epispasticus may be used. I have seen most excellent effects from this plan. The spinal ice-bag sometimes accomplishes the same result.

In acute eczema, if taken early, sharp catharsis will sometimes tend to lessen the severity of the attack by reducing the congestion of the skin. In chronic eczema, even without evident renal derangement, the acetate of potash in fifteen-grain doses will prove useful. The itching

may be so severe in some cases that even our local remedies may not allay it, and it may seem necessary to give some medicine to procure sleep. Never use opium. The bromides, chloral, or phenacetine may be given. Hyde and Montgomery speak well of calcium chloride in full doses. Bulkley recommends tincture of gelsemium, of which ten drops are to be given, and repeated and increased every half-hour till relief is obtained, or constitutional symptoms of languor, tranquillity, dizziness, impairment of vision, and drooping of the lids, are produced. Quinine, in one-half-grain to fifteen-grain doses, given at bedtime, is commended by some for the same purpose.

Rest in bed is desirable in all severe cases of eczema whether they are acute or exacerbations of chronic forms.

Local Treatment. In all cases, whether due to purely local causes or a combination of these and some general cause, local treatment is of the greatest importance. The books teem with prescriptions which have been found efficacious, and some of them contain so many ingredients that it is hard to determine with exactness to what the benefit is due. After all, the matter is very simple, and, if the principles are mastered, little difficulty will be found in accomplishing the desired end. *In acute cases, where we have heat and swelling, employ soothing remedies; in subacute cases, where the swelling has subsided and where the papulation, vesiculation, pustulation, or exudation is more or less active, use astringent and protective remedies; in chronic cases, where we have thickening with scaling, stimulate; in all cases protect the skin from external irritation.* It is better to learn how to use a few remedies and to know what to expect from them, than to try every new method that appears in the medical press.

It is a good, broad rule that water should not be used on an eczematous skin, as it removes the newly formed epidermis and exposes the tender skin to the air. In all but chronic cases it should be used sparingly, and only to remove dirt, or crusts, or scales, and the skin should be at once covered with some protecting powder or ointment. If water is used, it should be either rain or boiled water, or water with a little soda, one drachm to the basinful, or

bran in it. Often it is better to clean the skin with an oily lotion than to use water.

In *acute eczema* lime-water, liquor plumbi subacetatis dil., lead-and-opium wash, or solutions of borax and soda, one or two drachms to the pint, may be sopped on three or four times a day, dusted over with cornstarch, compound stearate of zinc, dolomol, bismuth, lycopodium, kaolin, or French chalk, and covered with light, old linen or muslin. All these will allay the itching; but if this is especially severe, the following may be used:

℞				
	Camphori,	ʒss;	3	
	Zinci oxidi,	ʒij;	15	
	Amyli,	ʒiv;	ad 30	M.

Startin recommends the following:

℞				
	Zinci oxidi,	ʒss;	6	
	Pulv. calaminæ præp.,	℈iv;	2	
	Glycerini,	ʒj;	12	
	Liq. calcis,	ʒvij;	ad 100	M.

As soon as the early and most acute stage is passed—that is, in the *subacute eczema*—a protecting and soothing ointment is to be used, and of these no one is safer than the standard benzoated oxide of zinc ointment that usually can be obtained anywhere. The cucumber ointment is also soothing. If the case be one in which there is much discharge, as in pustular, vesicular, and weeping eczemas, Lassar's paste is better than the oxide of zinc ointment, as being a paste it allows the discharge to percolate through it. It is made as follows:

℞				
	Zinci oxidi, Amyli,	āā ʒij;	āā 8	
	Vaselini,	ʒss;	16	M.

The addition of ten to fifteen grains of salicylic acid to the ounce increases its antipruritic quality. The only difficulty is that it takes time and muscle to make, and but few druggists make it well. See that in it, as in all other ointments, there are no gritty particles left. All ointments must be smooth, or they do harm rather than good. In

using ointments in eczema they should be evenly spread upon cheesecloth folded four times, or upon old washed muslin, in a layer as thick as the back of a table-knife blade, applied to the affected part and bound down snugly with a bandage. They should be changed twice a day, or more often if the discharge is profuse.

Painting a limited moist patch of eczema with a solution of nitrate of silver, three to ten grains to the ounce, is often a most prompt method of curing the disease.

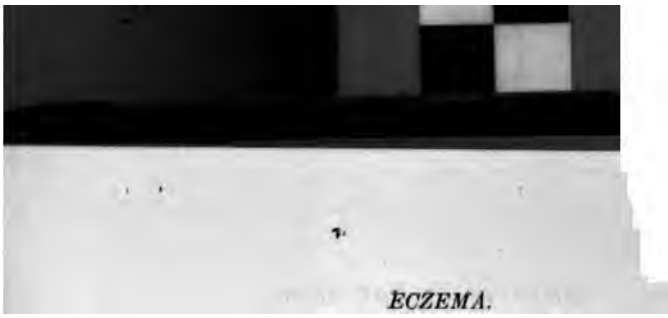
Ointments are objectionable on account of their greasiness, and where possible it is pleasanter to use lotions. Of these, one of

℞	Calamin.,	gr. xx;	1	
	Zinci oxid.,	ʒj;	3	
	Glycerin.,	ʒiv;	12	
	Aquæ calcis,	ʒvj;	18	
	Aquæ rosæ,	ad ʒiv;	ad 100	M.

answers well. To this may be added carbolic acid in one or two per cent. strength, to relieve the itching. Peroxide of hydrogen sopped on exercises a beneficial effect on pustulation.

The diachylon ointment of Hebra will often prove beneficial, especially after the subsidence of acute symptoms. It is best used diluted with ungt. aquæ rosæ in the proportion of two parts to one. Most cases that we are called upon to treat are in or near to the subacute stage, as the acute stage soon passes off. It is always advisable to begin treatment not too boldly. If our protecting and astringent remedies do not cure the case after a fair trial, then we must add stimulants, and of these one of the most reliable is tar, adding it at first in the proportion of about fifteen drops of the oil of cade to the ounce of ointment-base, such as oxide of zinc ointment.

In *chronic squamous eczema* we need stimulation to whip up the circulation, to produce absorption of the infiltration of the skin, and to promote a return to health. Here tar is one of our most reliable remedies, and it can be used in various strengths and ways. We may use the oil of cade, *oleum cadini*, the oil of birch, *oleum rusci*, or pix liquida.



There is some doubt and difficulty about obtaining gen oleum rusci, which is largely used by tanners in the p aration of Russia leather. The oil of cade is most u Some prefer this ointment:

℞	Ol. cadini,	℥ss–j; }	āā 2–4	
	Zinci oxidi,	℥ss–j; }		
	Unguenti aquæ rosæ	ad ℥j;	ad 30	M.

Or the cade may be added to the oxide of zinc oint in the proportion of a drachm to the ounce. Or liquida may be substituted in about double the streng

Another most excellent way of using tar, and pr to the latter, because not so liable to stain the clo that proposed by Pick, namely, to make a strong tinc of tar, using forty parts of pix liquida to twenty part alcohol; and to paint the part every night with three coats of this tincture, letting each coat dry on before another is applied. Then cover with oxide of zinc ointment; the ointment being changed morning and night.

Bulkley in some cases recommends tar in what he names liquor picis alkalinus, which is made as follows:

℞	Picis liquidæ,	℥ij;	25	
	Potass. causticæ,	℥j;	12.5	
	Aquæ,	ad ℥v;	ad 100	M.

Dissolve the potash in the water and add slowly to the tar in a mortar with friction. This is to be used diluted twenty or more times with water, and followed by oxide of zinc ointment.

In some very chronic, thickened eczemas the tar may be rubbed in pure. If the eczema is very extensive, the tar may be used in olive oil or cotton-seed oil and smeared over the body. In some cases the tar will give rise to systemic poisoning, the urine will become black, and the patient will suffer from headache, oppression, nausea, vomiting, and diarrhœa, and the pulse will become frequent. Of course, under these circumstances the tar must be stopped.

Sulphur is, next to tar, one of our best stimulating remedies in squamous eczema. It is not so reliable, as it

is more uncertain in its effects. It finds its best use in circumscribed patches, and may be used in vaseline or simple ointment in the strength of one or two drachms to the ounce. In some skins it produces a good deal of dermatitis.

Green soap is often of the greatest service in chronic eczema. It is to be used in the following way: Take either the green soap or Bagoe's prepared olive soap; warm water; and oxide of zinc ointment spread on muslin or linen. Dip a piece of flannel in the soap and then in the water, and then with it scrub the parts vigorously until all the scales are removed and the skin looks somewhat raw. Now wash off all the soap with plenty of water, dab the part dry with a soft towel, immediately cover with the ointment, and apply a bandage. The soap is to be used once a day and the ointment changed twice a day.

Caustic potash, fifteen grains to one drachm to the ounce; or salicylic acid, ten to twenty per cent., in ether, may be used to reduce very much thickened patches. *Nitrate of silver*, ten to fifteen grains to the ounce, may also be used; as well as *salicylic acid*, ten to twenty per cent., and *chrysarobin*, ten per cent.

Unguent. hydrarg. ammoniat. is of use in chronic eczema of limited area.

Ichthyol and *resorcin* are two of the more recent additions to our armamentarium. The former has a more disagreeable odor than tar, and as Crocker says of it: "We do not want more of such remedies, as tar fills that place so well; what is required are remedies which do not stain nor smell." In chronic, thickened eczema a forty to fifty per cent. aqueous solution well rubbed in once a day with a stencil or stiff paint brush acts admirably. *Resorcin* in from two to five per cent. strength is a good stimulating application.

For the reduction of infiltration and removing the scales in a chronic eczema nothing is better for a time than *sheet rubber* applied to the part and bound down with a roller bandage. The rubber should be removed once a day, sponged off with soda and water, and reapplied. The relief to the itching procured by this means is sometimes

surprising. As soon as the infiltration is reduced we should resort to our tar remedies for completion of the cure.

Many attempts have been made to find a substitute for greasy or oily applications in the treatment of skin diseases. Thus we have the *plaster mulls* of Unna, in which a plaster mass is incorporated with the mulls. Many speak loudly in their praise. Then *collodion* and *traumaticin* have been used, and answer well, the tar, salicylic acid, or what not, being dissolved or held in suspension. In this way chrysarobin may be used on limited patches of chronic eczema. *Gelatin* preparations are very valuable, and applied either to a subacute or chronic patch, especially when there is no moisture, will allay the itching and hasten the cure. Unna's gelatin paste sets at once. It is composed of

℞	Zinci oxidi,	30.	
	Gelatini,	30.	
	Glycerini,	39.	
	Aquæ,	10.	M.

It forms a hard mass that must be melted before it is used. The best way to use it is to put it in a small tin saucepan that fits into another pan that holds water, such as is used for sterilizing milk or cooking oatmeal gruel. This can be heated over a Bunsen burner or spirit lamp. When melted and still warm, it is to be painted over the part under treatment by means of a wide paint brush. Immediately over it place a layer of absorbent cotton, and over all a roller bandage. This dressing may be left on for two or three days. The gelatin may be used as an excipient. *Gelanthum* is an ointment base that does not contain lard or oil and is a good excipient. *Medicated soaps* have their advocates. I have had no experience with the last.

In the treatment of eczema we must not content ourselves by simply giving our patient an ointment, but we must instruct him in the way he should use it. As a rule, and where possible, ointments should not be smeared on the skin, but spread on old linen, muslin, or the like,

[illegible]

[illegible]

[illegible]

ably on account of the nervous irritation inducing itching, for the relief of which the patient scratches and produces the eczema. Other predisposing causes are all those that cause pruritus ani, which see.

In treatment the first thing is to stop the use of tobacco, a hard task, as the patient is ofttimes incredulous of its efficacy. Horseback riding and much walking will sometimes have to be stopped, as they may aggravate the trouble. If hemorrhoids or fissures of the mucous membrane are present, as they quite frequently are, they must be cured in order to obtain a permanent cure of the eczema. The bowels must be kept easy by laxatives, so that one soft movement may be had each day. Liver derangements must be corrected to prevent portal congestion, and dieting will be of service. The nates must be separated by folds of lint, and the parts kept scrupulously clean, though water should be used as sparingly as possible. The itching may be relieved by sopping on hot water, dabbing the part dry, and making the chosen application. Tar or diachylon ointment may be used covered with a dusting powder. Usually the drier the parts can be kept and the less ointment is used the better. Painting a limited surface with salicylic acid, ten to fifteen grains in an ounce of flexible collodion, is often followed by the happiest results. Painting with nitrate of silver, ten to fifteen grains to the ounce, is sometimes advisable. Here, too, if there is much thickening, wearing rubber cloth for a few days or using a salicylic acid plaster will greatly hasten the cure. A well-applied T-bandage is the best way of keeping the dressings in place.

Eczema Aurium. Eczema may affect both the ear itself and the inside of the auditory canal. When the ear is acutely affected, it is swollen at times so much as to stand out from the head. In acute eczema of the external auditory canal, which is secondary to that of the auricle, the swelling may be so great as to cause dulness if not loss of hearing. Of eczema of the outer part of the ear nothing special need be said excepting that the dressings must be exactly applied to all the little furrows of the ear, and a pledget of lint placed in the furrow behind the ear, thus

separating it from the side of the head, so that in sleeping the two surfaces of skin do not come in contact. Painting this part of the ear with a solution of nitrate of silver, ten grains to the ounce, will sometimes aid greatly in converting a moist eczema into a squamous one. A cure will be hastened by having the ear covered with a linen bag made in the fashion of an ear-muff. Eczema of the auditory canal is sometimes very annoying on account of an accumulation of scales, dulling the hearing. For this condition an ointment of tannin, one drachm to the ounce, or a solution of nitrate of silver, five to twenty grains to the ounce, may be applied thoroughly by means of absorbent cotton on a probe, the ear being properly lighted by means of a head-mirror, and the operator having the requisite skill. Otherwise the tannic acid ointment, or one of oxide of zinc, or the diachylon ointment may be applied on pledgets of lint rolled up to fit the orifice. It must be remembered that ointments mixed with the exfoliated epidermis of the canal, and forming a paste with it, tend to stop up the canal and produce deafness. Such deafness can be removed by syringing, or mopping with oiled cotton. The insufflation of boric acid will sometimes be better yet. The ear should not be syringed out often, and when it is necessary to do so a solution of borax or baking soda should be used.

Eczema Barbæ is scarcely ever confined to the bearded portion of the face, but it generally runs over onto the bordering skin, and is often but a part of eczema of the face. It has practically the same symptoms as has eczema capitis. It needs to be diagnosticated from ringworm and sycosis, which see. In treatment, shaving, or cutting the hair close, which is better, should be practised so that remedies may be closely applied. Plucking the hair from the pustules is to be recommended. Its further treatment is the same as that of eczema capitis. It is an obstinate form of eczema, prone to relapses.

Eczema Capitis The scalp is very commonly the
[illegible] eczema, either by itself or in connection with
elsewhere. It has received various names, such
[illegible]rrigo; melitagra; scalled head; milk

crust; or vesicular or running scall. While any variety of eczema may occur on the scalp, the vesicular is very rarely seen, and the most common is the pustular, and the final stage the squamous. In the acute stage the scalp may be swollen and boggy, and moist, with the hair stuck together. We may find the scalp crusted with a yellowish serous crust, but more commonly there is a greenish or blackish purulent crust, while the scalp is swollen but little. In some cases of pustular eczema there will be discrete, rather large pustules scattered through the hair, besides moist and crusted patches. The hair is always matted together, and the odor from the scalp is unpleasant. If the crusts are removed, they will soon reform.

In both the erythematous and the squamous forms the scalp is red and scaly. In the latter variety there is apt to be more or less thickening of the scalp, and in very severe cases the scalp may be cracked. Not infrequently there will be squamous patches in some places and moist and crusted patches in other places.

With eczema of the scalp there is almost always eczema behind the ears. The cervical glands are very often swollen, especially in children, but they need give no anxiety, as they very rarely suppurate. In the chronic form there may be loss of hair, especially in children, when it is sometimes mechanically rubbed off from the occiput. It is never permanently lost. All forms are itchy, the pustular form least so. The patient may complain of a "drawn" feeling of the scalp. As in all inflammatory diseases of the scalp, there is over-activity of the sebaceous glands, and the crusts will contain a certain amount of fat. In chronic cases there may be, on the other hand, a deficiency of fat. Pediculi are often found on the hair. The disease may affect the whole scalp or only a portion of it, and may run an acute or chronic course.

Etiology. The exciting causes of eczema capitis are all irritants to the scalp. Sometimes it is well-meant but badly directed efforts at cleanliness, especially in children. Combing with a fine-toothed comb, too vigorous use of

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soap and water, the use of a too stiff brush, are some of these. Pediculi are very often the cause—not the pediculi themselves, but the scratching to relieve the itching produced by them. An eczema of the occiput should always suggest their presence, and search then will generally reveal the pediculi or their nits upon the hair. Sometimes remedies used to kill the lice will set up an eczema, such as strong mercurial ointments. In most cases eczema of the scalp is but a part of a more or less general eczema and due to the same causes.

DIAGNOSIS. The disease must be differentiated from pityriasis capitis, ringworm, erysipelas, lupus erythematosus, a dermatitis, psoriasis, seborrhœa, favus, pediculosis, and syphilis. See under these diseases.

TREATMENT. The treatment of eczema capitis is along the same lines as is that of the disease in general. On the scalp it is always best to use our remedies either in vaseline or oil, as preparations of lard make a disagreeable mess with the hair. Nor should a thick ointment ever be used, excepting perhaps in children before their hair is grown, or on bald heads. If there are crusts on the scalp, they must be removed before any local treatment is used. This may be done best by soaking them with sweet oil containing one or two per cent. of salicylic acid for twelve or twenty-four hours, and then washing them away with soap and water. Plenty of oil must be used, and it is well to tie the head up in a towel over night. A woman's or half-grown girl's hair should never be cut in order to treat the scalp. In applying remedies to the scalp, after the acute stage, they should be rubbed in, and not merely smeared over it.

In acute eczema equal parts of lime-water and sweet or almond oil, with or without one or two per cent. of salicylic acid, form a good application.

In subacute and chronic eczema of the scalp, tar, especially the oil of cade, is our most reliable remedy. It must be remembered that it can be used much earlier on the scalp than elsewhere, and most cases will improve under it as soon as the acute stage is passed. It may be used in the strength of twenty drops to the ounce of oil,

and increased to one or two drachms tc the ounce. Many people object to the odor of the tar. We can substitute for it:

℞ Hydrarg. ammon., gr. xx; 5|
Vaselini, ad ℥j; ad 100| M.

Or,

℞ Ac. salicylici, gr. xx–xxx; 5–6|
Ol. olivæ, ad ℥j; ad 100| M.

The oil of cajuput in five to ten per cent. strength may be tried. Neither of these is as good as tar.

If the disease is in a chronic condition, shampooing with green soap or its tincture, followed by some oily, not very stimulating application, will prove curative. In this connection it is sometimes best to exhibit the tar in an alcoholic solution. Resorcin in three to ten per cent. strength may be used cautiously in this way. If the scalp is cracked and thickened, great and prompt amelioration will be secured by having the patient wear a close-fitting cap of rubber.

Eczema Crurum. Eczema of the legs acquires its peculiarities from the fact that the circulation of the parts is less active than it is in the upper portions of the body, on account of the action of gravity upon the returning venous blood. It usually is seen as an eczema madidans, though any form may be present. Varicose veins, either superficial or deep, predispose to it; and an eczema arising from such a cause is spoken of as *varicose eczema.* It is questionable if such a condition should not be called varicose dermatitis. It is attended with swelling and often great œdema. It is located principally on the lower part of the leg, and is often complicated by ulceration. Pigmentation of more or less dark-brown color follows or accompanies it, if of any chronicity, and occasionally purpuric spots will be scattered about the chronic patch. As to treatment, nothing special need be said except that it is always advisable to have the legs bandaged snugly from the toes to the knee, and that the best result will be attained when the bandaging is done by the doctor or a trained nurse.

Eczema Genitalium often causes a great deal of discom-

fort on account of the excessive itching that accompanies it. It affects the scrotum most commonly, which in some cases will be greatly thickened and feel like leather. The skin of the penis also suffers at times as well as the glans. In women, both the lesser and the greater lips of the vulva, as well as the entrance to the vagina, may be affected, and show excoriations and thickening. All forms of eczema may be encountered in the genital region. In chronic eczema of the penis the organ becomes greatly enlarged both laterally and longitudinally, on account of the thickening of the skin. The disease may be confined to the genitals, or extend to the thighs or the anal region. The presence of diabetes should always be suspected in a case of this kind, and the urine should be examined for sugar. Leucorrhœa is a common cause of the disease in women.

TREATMENT. In the treatment of eczema of the genitals, apart from that appropriate to general conditions, and specially to diabetes, it is essential that men should wear a well-fitting suspensory bandage, inside of which the dressing may be placed. The itching may be greatly relieved in all forms by directing the patient to sit over a vessel containing hot water and to sop the water up on the parts. In subacute eczema the skin should be mopped dry, the oxide of zinc ointment, diachylon ointment, or Lassar's paste immediately applied, and the suspensory bandage adjusted. Carbolic acid, one or two drachms to the ounce of glycerin and water, may also be used, lightly dabbed on, for the purpose of allaying the itching. It should be followed by either of the above ointments. For chronic, thickened eczema, wearing sheet rubber inside of the suspensory bandage will give positive and immediate relief, and greatly reduce the thickening. After a few days it is well to follow it with a tar or resorcin ointment. The use of the tincture of tar, as spoken of under chronic eczema (page 201), is often most serviceable. In some cases nothing will do so well as the application of the nitrate of silver solution, already given. The spirit of nitrous ether may be used as an excipient of this. Hardaway speaks highly of rubbing the scrotum with a solution of salicylic

acid in alcohol, one drachm to the ounce, and following this with a boric acid or diachylon ointment.

Women should use a T-bandage instead of a suspensory. Otherwise the treatment is the same. In them I have seen the nitrate of silver treatment do remarkably well.

Eczema Intertrigo occurs wherever folds of skin come in contact. It usually follows a simple intertrigo, differing from it in having a discharge that stiffens linen, and in its pruritus. In its treatment the parts should be kept separated and as dry as possible by means of a dusting powder, or by placing a piece of old linen or cheesecloth between the apposed folds of skin. For a dusting powder we may use cornstarch either alone or with bismuth or zinc oxide; lycopodium is also an excellent powder; but the best powder of all is the compound stearate of zinc. Kaposi has seen gangrenous and diphtheritic inflammation begin in an intertriginous eczema. As a rule, these cases do best without ointments. This does not apply to eczema intertrigo of the crotch. Here it is well to cover the parts with a greasy application, so as to protect them from the action of the urine. A dilute diachylon ointment often answers admirably.

Eczema Labiorum is usually due to a nasal catarrh, and can be cured only when the cause is removed. Eczema may occur about the mouth in an orbicular manner. Many people suffer from chapped lips, especially in winter. This is an eczema of the vermilion border. For this little can be done except to caution the patient against moistening the lips. Greasing the lips every night with camphor-ice or the like keeps them in good condition. Glycerin agrees well with some skins, and is harmful to others. The lip may be painted with compound tincture of benzoin.

Eczema Mammarum et Mammillarum. One of the most annoying accidents to befall a nursing woman is eczema of the nipples. They become excoriated and fissured, the cracks sometimes extending to the base of the nipple. At times a drop of pus can be squeezed from the bottom of the crack. They are exquisitely sensitive, and every time the baby takes hold the woman suffers agony. The

moisture from the child's mouth and the decomposing milk left on the nipple aggravate the trouble. Mastitis may complicate matters. In the intervals of nursing the nipple scabs over. Either one or both nipples may be affected. The disease may extend onto the breasts, or the breasts may be affected independently of the nipples. Women with pendulous and heavy breasts frequently suffer with a moist eczema in the sulcus beneath them. Apart from this, nothing special need be said about eczema of the breasts. There is one disease of the breasts, called Paget's disease of the nipple, which at first very closely resembles eczema, and it is a question whether it is carcinomatous all the way through, or an eczema developing into a carcinoma. (See Paget's disease, for diagnosis.)

TREATMENT. It is often possible to cure eczema of the nipples even while the child nurses. Sometimes it will be necessary to wean the child. Women during the latter months of pregnancy should handle their nipples every day and bathe them with whiskey or alcohol, to which may be added twenty or thirty grains of borax to the ounce. This will do much to prevent future trouble. The suckling having begun, the nipples should be carefully washed off and dried with a soft handkerchief after each nursing, and dressed with oxide of zinc or diachylon ointment should eczema show itself. Of course, the ointment should be removed before the infant is put to the breast, and this should be done with as little water and as much gentleness as possible. If there are cracks, the child should nurse through a rubber nipple, and when it lets go the nipple should be dried and painted with compound tincture of benzoin, or the solution of nitrate of silver already spoken of. It is also advised to touch the cracks with the nitrate of silver stick. This is very painful, and of little use as long as the infiltration of the nipple that causes them continues. The nipples may be washed with a borax solution and covered with an ointment of borax. It is always advisable to use nothing that is poisonous in the dressings. Hardaway recommends the following for eczema under the breasts:

℞ Thymol., gr. j; |065
Pulv. zinci oleat., ʒj; 32| M.

Eczema Manuum. Eczema of the hands has been called "washerwoman's itch," "grocer's itch," "bricklayer's itch," and various other itches. It is in many cases a trade eczema, caused by strong alkaline soaps, or contact with sugar, mortar, or other irritant, such as bichloride solutions, formalin, and the like. It may arise independently of any of these trade causes, or it may be part of a general eczema. The acute forms, as they occur upon the back of the hands, do not differ from the same on other parts of the body, and the same may be said of the chronic forms. The palms are seldom primarily affected, but secondarily to eczema of the wrists or fingers. The epidermis of the palms, as well as that of the palmar surfaces of the fingers, is thicker than that of the other parts of the body, excepting the soles of the feet, and so the vesicles do not rupture readily, but are seen like little, more or less translucent grains under the skin. When they rupture, the skin is left more or less ragged and worm-eaten. The skin over all the joints is liable to crack and form painful fissures. Chronic eczema of the palms prevents free movement of them on account of the thickening and the painful cracking. The skin is reddened and covered with large adherent scales. Itching is intense at times. The whole palm may be affected, or the disease may form limited areas, as upon the center of the palm, over the thenar eminence, and upon the finger-ends. This form of eczema is often difficult of diagnosis from the squamous syphilide. The occurrence of the lesions upon one hand alone should arouse suspicion of syphilis, especially if little or no itching is complained of.

TREATMENT. Eczema of the palms is one of the most obstinate of eczemas to treat when of chronic form, and requires active stimulation by means of tar; salicylic acid; the soap and salve treatment; rubbing in five to ten per cent. of the oleate of mercury; or painting with caustic potash. The constant wearing of rubber gloves is excellent for the purpose of softening the skin and preparing

it for other remedies. It is best to buy the canvas-lined gloves, turn them inside out, and wear the rubber next the skin. The hands must be kept out of water. Where this cannot be done, great care must be used in drying them. It is well to have the patient dry on two towels or before the fire, and then either to thrust the hands in a box of cornstarch powder or flour, or preferably to apply the proper dressings. Eczema of the back of the hands is treated the same as an eczema elsewhere. Unna teaches that eczema of the hands and fingers is always secondary to eczema seborrhoicum capitis. He recommends in the disease, as it affects cooks, housemaids, and the like, that the hands, on going to bed, should be washed with green soap and water when the eczema is of squamous form, and with a weaker soap when it is moist. Then a paste of

Oxide of zinc,	40 parts.
Chalk Lead-water, Linseed oil,	āā 20 "

or one of

Oxide of zinc, Sulphur, Chalk, Linseed oil, Lime-water,	āā 20 parts.

is to be well rubbed in. Before using the paste, when the eczema is moist the patch should be powdered with flour. The paste is covered with the thinnest rubber tissue, such as is used for bouquet handles. This will stick well. Cotton gloves can be worn at night. In the morning the dressing is not to be removed until the roughest part of the work is done. Then it is to be washed off, and a little of the paste applied until time for the evening dressing.

In eczema of the hands of masons, washerwomen, and the like, an endeavor must be made to thicken the corneous layer of the skin by dressing them at night with a paste of

Resorcin., Ungt. zinci oxid.,	āā 10 parts.
Terræ silicæ,	2 "

and applying oil or vaseline over it. In the morning the hands are not to be washed, but anointed with some oil. After a time the corneous layer thickens and the old skin falls off. Eczema of the hands due to occupation becomes rapidly well when the patient no longer follows his trade. It is sometimes necessary to seek some other occupation. Hospital nurses are often much troubled in this way, and have to give up nursing.

Eczema Narium is often, if not always, associated with a chronic rhinitis. It is very obstinate. Crusts form on the inside of the nose, are picked off, re-form, and after a time ulcers result from the constant irritation. Sometimes in adults the disease locates itself about the hair follicles, and is very annoying. It is a not uncommon point of departure for recurrent attacks of facial erysipelas. If long continued, it gives rise to a thickening of the upper lip. Furuncles sometimes complicate matters.

In the *treatment* of these cases the first attention must be given to the cure of the rhinitis. Then all crusts must be removed by soaking with oil. For the eczema we may use:

℞ Glycerol. plumbi subacetat., Ungt. aquæ rosæ, } āā p. æ. M.

as recommended by Hardaway.

Herzog[1] recommends the yellow oxide of mercury ointment, or equal parts of ungt. plumbi and vaseline, spread on lint and accurately applied to the diseased part. Unna rolls his zinc and red precipitate ointment muslin into a pledget and introduces it into the nose. In obstinate cases about the hairs epilation by electrolysis may have to be performed.

Eczema Palpebrarum is usually of an erythematous character, and occurs as part of the same disease elsewhere. Eczema of the ciliæ, also called blepharitis ciliaris, is always pustular. The edges of the lids are swollen, rounded, and more or less thickly strewn with pustules or crusts. The lids stick together on waking in the morning. In the squamous form the edges of the lids are merely red and

[1] Arch. f. Kinderheilkunde, 1887, p. 211.

scaly. It is almost always symmetrical, occurs usually in strumous subjects, and is due to conjunctivitis.

TREATMENT. The lids should be anointed before going to sleep, in order to prevent their sticking together. I have always found the following ointment, as given by my friend, Prof. D. Webster, of the New York Polyclinic, most excellent:

℞ Ac. salicylici,	gr. x;	3	
Ungt. hydrarg. oxid. rubri,	ʒj;	5	
Ungt. aquæ rosæ,	ʒvj;	ad 30	M.

An ointment composed of

℞ Hydrarg. oxid. flav.,	gr. ij–viij;	0.13–5	
Vaselini,	ʒj;	ad 32	M.

is recommended by Hardaway. Resorcin, gr. iij in cold cream, ʒijss, is editorially commended in the *Monatshefte f. prakt. Dermat.*, 1888, vii., 1057. Whatever is used, we must be sure that any substance entering into it is in an impalpable powder, so as to avoid the possibility of getting anything gritty into the eye. Epilation may be necessary in some cases. Solutions of bichloride of mercury (0.05 : 500) are commended, both for the conjunctivitis and the eczema dependent upon it. In any event, the conjunctivitis must be treated.

Eczema Pedum. Eczema of the soles of the feet, though not so common as that of the palms, presents the same symptoms and calls for the same treatment. The greatest difficulty will be encountered in dressing the toes properly. For this the ointment should be spread upon a long and narrow strip of lint, the center of the strip placed against the big toe, and the strip wound in and out between the

piece of salve-muslin may be substituted for this ntage. A piece of rubber sheeting cut to fit the ound down with a bandage takes the place of glove.

Unguium. Eczema may affect the nail-fold the nail may be scarcely diseased; or the matrix ed, when the nail will lose its luster,

and become rough, uneven, striated, and atrophied. Only one nail may be diseased, or all of them may be. The nail may be depressed in the center and turned up at the end, with an accumulation of scales under its free border. Usually eczema of the nails occurs as a part of a general eczema, but it may occur as an independent disease. The fleshy parts about the nails usually present signs of inflammation, and often of an evident eczema.

It is best treated by means of cots made of rubber. It must be remembered that an ointment can never be used when rubber is, as the grease rots it. If the time has come for an ointment, linen or leather cots must be substituted for the rubber ones. The ointment to be used will depend upon the condition of the skin about the nails. Strapping the nails with a ten per cent. salicylic acid plaster is often most satisfactory.

Universal Eczema is uncommon, and when it does occur it is usually of the erythematous or squamous variety, with a tendency to cracking in the skin creases of the joints, exudation, scaling, and itching. These symptoms will serve to distinguish it from dermatitis exfoliativa, to which it bears a strong resemblance. Constitutional disturbances, such as fever and chills, loss of appetite, and digestive disorders, are not uncommon in these truly pitiable cases. Furunculosis is apt to complicate matters. The patients are slow in recovering, and are apt to be a good deal pulled down by the disease.

TREATMENT. These patients should be put to bed and the underlying cause searched for, and if possible removed. They are best treated locally by lotions, oils, or vaseline. The ordinary Carron oil, equal parts of linseed oil and lime-water; cotton-seed oil with carbolic acid, 1 part of acid to 60 of oil; or simply smearing the body with vaseline and powdering on cornstarch, will each relieve. Salicylic acid in oil, 1 in 30, will also allay the discomfort, but it sometimes causes symptoms of constitutional poisoning, and has to be stopped. Alkaline baths, warm, followed by one of the above, after tapping the skin gently dry, will also relieve, but the bath should not be used more than once a day. Its temperature should be about

98° F.; it should last ten or fifteen minutes. Bulkley recommends anointing the skin, before drying it, with—

℞ Acid. carbolici, ℥j–℥ij: 1–6
Glycerit. amyli, ad ℥iv; ad 100. M.

applying it freely. The best way of drying the skin is to envelop the patient in a warm sheet, and pat the skin dry. As the intensity of the eczema lessens, the frequency of the baths must be reduced. The disease will gradually become localized in patches.

Eczema Infantile presents certain peculiarities that warrant its being considered as a special variety of eczema. It is very prone to be of the pustular form, following the rule that in delicate or debilitated subjects an eruption upon the skin is apt to be pustular. While in adults eczema of the face is usually erythematous, in infants it is nearly always pustular. In them it is quite common, if not the rule, to have several regions affected at once, such as the scalp, the face, and the region of the crotch. In them, also, eczema madidans often occurs in these regions. While in adults that form of eczema is most frequently seen upon the legs, in infants it is quite exceptional there. Eczema of the scalp in infants presents itself as a thick crust formed of purulent matter, epithelial débris, and sebaceous matter. This is called "milk crust." When the crust is raised the scalp will be found to be thickened, swollen, boggy, and moist, with a purulent secretion. The whole scalp may be affected, or only the vertex. With it there will nearly always be a moist surface behind the ears, even though the face may be comparatively or absolutely free. The lymphatic glands will be swollen, but they seldom suppurate. When the face is affected it will sometimes be studded over with holes, superficial ulcerations, which, however, never leave scars. This appearance occurs very rarely in adults. It is often striking to note that the skin about the mouth and nose, and below the [illegible] fect health, though pale, while all the rest [illegible] be involved in the moist intense inflamma- [illegible] es of the neck, the flexures of the joints,

and the region of the genitals usually show an erythematous or a moist intertriginous eczema. At times the whole body will be affected with a general, but very rarely with a universal eczema. While the pustular and intertriginous forms of eczema are the most common, we may have all forms present at one time. The papular form is also frequently met with alone. Itching is usually severe, keeping the little patient awake at night, and the tearing made by the nails to relieve the itching gives rise to immense excoriations, especially of the face. Unrelieved, the little patients sometimes become pitiable objects on account of loss of sleep and constant nervous excitement.

ETIOLOGY. There are several causes tending to produce eczema in infants. Their skin is vulnerable to all irritants. When we consider that the child is born into the cold world, suddenly launched out of a warm atmosphere in which it was surrounded by an alkaline fluid, covered over with a fatty coating, and safe from the action of the atmospheric air, we can but wonder that its skin escapes as well as it does. More than one-third of the cases of eczema occurring before the fifth year of life occur in the first year. Add to the vulnerability of the skin the overzealous care as to cleanliness commonly bestowed upon it for a few months after birth, and we have a good explanation for its frequence. Bad diet has much to do with its production. The vast majority of the little sufferers are nursed too often if at the breast, "every time they cry" being the rule; or fed too frequently or improperly, "everything that is going" being again the rule. Inattention to the condition of the diapers is another active cause of eczema about the genitals. Teething is, without doubt, an exciting cause, a fresh outbreak of eczema marking the eruption of each tooth. Want of self-control in scratching is an aggravating circumstance. The frequent disturbances of digestion so common at this period of life predispose the infant's skin to eczema with rather more force than do the same troubles in adults. Fat babies are frequent subjects of eczema, especially of the intertriginous variety.

TREATMENT. The treatment of eczema infantile is

along the same lines as that of eczema in adults. Special stress must be laid upon the feeding of infants, and strict rules must be laid down for the parent's guidance. The condition of the breast milk must be inquired into, as it is often of too poor quality to nourish the child. Women will sometimes nurse their children far too long, with the idea of preventing conception. If the child is bottle-fed, the quality of the milk must be investigated, and it as well as the amount regulated. It is very necessary to insist upon the child wearing a mask in eczema of the face and scalp. This may be made of light flannel or muslin, a piece of the stuff being cut somewhat after the shape of the face, with holes cut out for the nose, eyes, and mouth. A skullcap is to be made, onto which the mask may be sewed, or pinned with safety-pins. The ointment is to be spread upon lint, cheesecloth, or washed muslin—a strip for the forehead, one for the chin, and one for each cheek. These are to be laid upon the face, and then the mask put over them, fastened to the skullcap, and tied behind the head by two strings from its lower corners. It is astonishing what relief this affords to the itching, and how much more rapidly the case improves under it. As it is impracticable to use the mask in public practice, Unna's paste made of

℞ Oxide of zinc, 40 parts.
Chalk,
Lead water, āā 20 " M.
Linseed oil,

may be used as a substitute. In making, the first two ingredients are to be mixed together, and then the last two, and then the two parts thus formed. It is to be painted on the part, and can not be readily rubbed off, though it can be washed off with a little oil.

The itching of the skin can be relieved by appropriate dressings, and it is never necessary to put the child in a home-made straight-jacket, by slipping it into a pillow-case and sewing up the same between the arms and body. This is an extreme measure. In eczema of the crotch great care must be given to changing the napkins as soon

as soiled. Fresh, clean ones must be put on, not those that have been dried without being washed. Dr. George H. Fox has called attention to a tight prepuce as the cause of eczema in male children. The urine dribbles away, so that a few drops wet the clean diapers, and thus keep up the trouble. In such cases judicious stretching of the prepuce may obviate the necessity for circumcision. Water must be kept from the skin in all acute cases.

Internally, calomel in tablet triturates, one-tenth grain, three times a day for three days, will give good results in many cases, even though the bowels are not constipated. After an interval of three days the calomel is to be given again. Care must be taken not to produce too frequent and loose movements of the bowels. The rhubarb and soda mixture is excellent in many cases. Other medication will be necessary according to the nature of the case. Cod-liver oil will often cure a case which has been very obstinate. The local treatment is according to the rules already given under Eczema.

Eczema Exfoliativum. See Eczema foliaceum; Dermatitis exfoliativa.

Eczema Marginatum. See Trichophytosis.

Eczema Seborrhoicum. Unna published his first paper on this subject in 1887. He does not believe that there is such a disease as seborrhœa sicca or pityriasis, but that both of these, as well as several other recognized forms of eczema, are all forms of his seborrhœal eczema. Among several other articles on the subject, that of Dr. George T. Elliot in Morrow's *System of Genito-urinary and Skin Diseases*, vol. iii., stands easily first. It is upon the papers of Unna and Elliot that this section is founded. The latter proposed the name of *dermatitis seborrhoica* for the disease, which is the preferable title. Unfortunately, Unna's title has become the popular name.

Symptoms. Unna teaches that the starting-point of almost all cases of seborrhœal eczema is the scalp; more rarely the margin of the eyelids, the axillæ, bend of the elbows, or cruro-scrotal fold. Upon the head it exists

mostly as a fine scaling of the scalp that is scarcely noticeable at its onset, and it is only after months or years that a sudden increase, loss of hair, an unusual amount of scaliness or collection of crusts, severe itching, or, finally, a circumscribed moist spot, or an evident eczema, leads the patient to consult a physician. The hair during the early stage is abnormally dry. A progressive alopecia pityrodes may show itself, the scaliness decreasing with the loss of the hair to make way for a hyperidrosis oleosa. A seborrhœa oleosa may complicate matters, and then we find fatty crusts on the scalp. Under these the scalp may be pale or slightly reddened. In the majority of cases the disease is confined to the scalp. The scaling and crusting may increase, a corona seborrhoica may form along the hair line, and the affection may extend upon the temples, over the ears to the neck, or onto the nose and cheeks. Or the catarrhal symptoms may be pronounced, and a moist eczema affect the scalp and ears, and, in children, the cheeks and forehead. (It will be readily recognized that his slightest form is the usually recognized pityriasis, his more pronounced form is seborrhœa sicca, and his most pronounced form is seborrhœa with dermatitis.)

From the scalp the disease may spread to other parts of the body, sometimes proceeding gradually from above downward; sometimes appearing in places far removed from the scalp, the intervening regions being free. Next to the head, the sternum is a favorite site for the eruption, where it most commonly assumes the crusted form, and most rarely the moist form. The sternum is affected secondarily to the scalp. The crusted form is in round or oval spots the size of the finger-nail; these group and partly coalesce, forming patches the size of a silver half-dollar, having a scalloped border. The color is yellow, with a delicate red border. These may clear up somewhat in the center and form circles, enclosing a yellowish center; or break and form bow-shaped figures with the convexity outward. The lesions of this form are usually covered with a greasy crust. The back is similarly affected. (This is Duhring's seborrhœa corporis.)

In the axillæ we meet most commonly with the moist

form, and here it shows a tendency to spread with rapidity upon the thorax. From the shoulders it spreads down upon the arms almost always in the form of yellowish-red, crusted papules, which tend to unite in patches, and also to form rings. At times it may look very much like psoriasis. It shows a predilection for the flexor surfaces. The backs of the hands and fingers are often affected with a moist eczema, the trunk and arms escaping.

Upon the palms and soles we find little heaped-up masses of scales corresponding to individual coil glands and resembling psoriasis guttata. Later the epidermis peels off, but there is never any moisture. The crusted form generally appears in ring or serpiginous patches on the trunk, buttocks, and hips. The cruro-scrotal fold and the approximating surfaces of the thigh and scrotum are favorite locations for the disease, probably forming here many of the so-called cases of eczema marginatum in its dry form with festooned margins to the patches, or as an intertrigo when it is more moist. The thigh and extensor surface of the knee are but little affected, while the popliteal space and the leg often are, either in the large papular or the thick-crusted form.

Upon the bearded portion of the face, when the beard is worn, we find either a diffused pityriasis, or circumscribed, reddened, itchy patches. Upon the face of women and the unbearded portions of the face in men we have circumscribed, scaly, yellowish or yellowish-gray, slightly elevated patches, mostly on the forehead, cheeks, and naso-labial fold. There may also be red papules, free from scales or with fine yellow ones, with redness of the skin between the papules. The face is the favorite location for a moist seborrhœal eczema, in children especially. The eyebrows are often involved as well as the eyelids. The latter are often swollen, and red, and scaly. The vermilion borders of the lips may be affected, and the lips swell, scale, crust, and perhaps crack. The disease may attack both the outer parts of the ear and the external auditory canal. Scaliness, itching, and great increase of cerumen mark the process in the latter situation.

ETIOLOGY. Seborrhœal eczema occurs at all ages and

in both sexes, but it is specially prevalent between puberty and thirty years of age. Though most of the patients with it seem to be in good health, careful inquiry will bring out the fact that they either are not in perfect condition or they are living unhygienic lives. Elliot thinks that an in-door life favors the disease. It is in all probability a parasitic and contagious disease. Barber shops doubtless are distributing centers of the malady. It is quite impossible to estimate the prevalence of the disease, as only the more pronounced cases are seen by the physician.

PATHOLOGY. According to Elliot, it is a dermatitis of catarrhal nature. He found evidences of inflammatory infiltration about the papillary vessels, and the ascending branches from the subpapillary plexus, and along the hair follicle, even in what is usually regarded as a pityriasis. In seborrhœa sicca, so called, the infiltration extended to the plexus itself, while in the higher grades the inflammation involved nearly the entire cutis. The sebaceous glands were apparently unchanged, and there were no evidences of the incomplete metamorphosis of their cells such as is usually described in seborrhœa sicca. Contrary to Unna's observations, he never found any fat in the sweat glands or their ducts, though there were evidences of degeneration of the glands; nor did he find fatty infiltration of the cutis or rete.

Unna has described a mulberry coccus in this disease which he names *morococcus*. Dr. Merrill[1] has succeeded in isolating a diplococcus, in making a pure culture of it, and in reproducing the disease by inoculation. If his observations are corroborated, we have the evidence that the disease is parasitic.

DIAGNOSIS. Many cases commonly regarded as eczema are included by Unna and Elliot in seborrhœal eczema or dermatitis, as the latter thinks the preferable name. In diagnosis stress is laid upon the fact that the disease begins upon the scalp and spreads from there downward in a more or less capricious manner; upon the more or less absence of itching; upon the superficial character of the lesions,

[1] New York Med. Journ., 1895, lxii., 528, and 1897, lxv., 322.

their tendency to take on definite forms, their yellowish color, and the greasy feeling of the crusts. In all these things the disease differs from an eczema. At times seborrhœal eczema of the body bears so striking a likeness to *pityriasis rosea* that it is hard to differentiate the two. Pityriasis rosea does not occur on the scalp; but as seborrhœal eczema is of very common occurrence on the scalp, and may be found in conjunction with pityriasis rosea, this is not of much aid in diagnosis. The rings of pityriasis rosea are not so greasy and yellow, have fawn-colored, dry centers, and lack the punctate border so often seen in seborrhœal eczema. Then pityriasis rosea runs a rapid and self-limited course, whereas seborrhœal eczema is chronic. If pityriasis rosea occurs typically upon the trunk, there is no difficulty; but when scaly ring-shaped patches occur on the limbs alone a positive diagnosis can not be made without a good deal of study.

The psoriasiform seborrhœal eczema differs from *psoriasis* in occurring in locations not typical of psoriasis, and in having a more yellowish cast of color, and more greasy, yellowish scales. Many cases can be diagnosticated only by taking into consideration the probabilities for and against psoriasis.

TREATMENT. The best remedy for the moist form is, according to Unna, sulphur, and for the scaly and crusted forms chrysarobin, pyrogallol, and resorcin. It is always necessary to direct special attention to the scalp and eyelids, as these are the foci from which the disease spreads. For the disease upon the back of the hand, it is recommended that the affected parts be covered with a thin layer of lint soaked in the following solution diluted one-half:

℞ Resorcin, }
Glycerin, } āā 10 parts.
Alcohol. dil., 180 " M.

and over this a large piece of gutta-percha tissue is to be bound. This is to be used at night, and during the day a zinc-oxide paste with or without tar, sulphur, or resorcin, is to be applied.

In my hands sulphur in some form answers best in most of the cases. Elliot commends for the disease, especially as it affects the scalp, lotions of resorcin, three to ten per cent. in equal parts of alcohol and water, with which the parts are to be moistened several times a day. The scalp is to be washed with soap and warm water once or twice a week. If the lotion is too drying, a resorcin ointment of the same strength is to be used once or twice a week or on alternate days. He uses sulphur as an after-treatment. The resorcin lotion sometimes causes exfoliation of the scalp.

Salicylic acid, three to five per cent., in the form of a lotion for the scalp, and of an ointment for the body; and the ammoniate of mercury ointment in full strength or diluted, are both excellent. Hodara[1] recommends in the dry forms of the disease an ointment composed of

℞	Chrysarobin.,	gr. ½ ad 1ʒ	02–1	
	Ichthyol.,	gr. ½ ad 1ʒ	04–1	
	Vaselin.,	ad ʒiij;	ad 100.	M.

which is to be applied at night and removed with cold cream in the morning. If reaction occurs, the ointment should not be used until it subsides. On the scalp the chrysarobin may be used in the same strength in alcohol, with the addition of a little castor oil.

Elephantiasis. Synonyms: Barbadoes leg; Cochin-China leg; Glandular disease of Barbadoes; Sarcocele of the Egyptians; Tropical big-leg; Bucnemia tropica; Morbus elephas; Pachydermia; Spargosis; Phlegmasia Malabarica; Hernia carnosa; Elephantiasis Indica seu Arabum.

A chronic endemic or sporadic disease of the skin, characterized by hyperplasia of the skin and subcutaneous tissues, due to a stoppage of the lymphatic or venous circulation, especially the former, affecting chiefly the lower extremities, and marked by enormous enlargement of the affected part.

Symptoms. In certain tropical regions, such as India, China, Japan, Egypt, Arabia, the West Indies, and South

[1] onatshefte f. prakt. Dermat., 1899, xxix., 264.

America, the disease is endemic; but sporadic cases occur in all parts of the world. The symptoms of the two forms differ only in that in the endemic variety there is usually what is called "elephantoid fever," with lumbar pain, nausea, and vomiting, and followed by sweating. The fever is of high grade, and bears a striking resemblance to malarial pyrexia. In sporadic cases the characteristic

FIG. 22.

Elephantiasis. (After TAYLOR.)

fever is wanting, though usually there is some constitutional disturbance preceding the local symptoms. In other instances the fever is altogether wanting.

Locally the affected part at first is attacked apparently by erysipelas, or a deep dermatitis, phlebitis, or lymphangitis; it becomes greatly reddened and swollen; and there

may or may not be a clear or milky discharge from the skin, and an eruption of vesicles. After a time these symptoms subside, but the part does not return to its normal size, and there is some pitting of the skin on pressure. After a few weeks or months there is a repetition of the attack, and the part is left still more enlarged. And so the case progresses with varying periods of quiescence, and recurrent erysipelatous attacks, each one leaving the part more thickened than before, until it attains enormous proportions. The normal contour of the part is lost; the folds of the skin are obliterated, the surface is smooth and shiny, and the color grows darker, even blackish. Now no impression can be made upon the swelling by pressure of the finger. Ulcerations are apt to occur, and some cases show varicose lymphatics which are tender and painful, and may rupture of themselves or by accident and discharge a clear or milky chylous, coagulable fluid. The escape of this fluid saps the patient's strength.

The parts most frequently affected are the legs, usually one, but may be both; and next to them, the male or female genitals. It occurs also on the arms, face, ears, female breast, and tongue. When the leg is the seat of the disease it becomes so large as to interfere with locomotion and compels the sufferer to take to his bed. The surface of the limb may be smooth; or uneven on account of the varicose lymphatics; or warty on account of enlargement of the papillæ. The foot and leg may melt into each other, as it were, all trace of the ankle being lost. Wherever there are two surfaces in contact there is apt to be a decomposition of the sweat, sebaceous matter, and epithelium, giving rise to a foul odor, like, but worse than, that of an ordinary intertrigo. The lymphatic glands in the groin are enlarged. Eczema may develop with its attendant itching. The appearance of this elephantine leg gave the name to the disease. When the scrotum is the affected part, vomiting often occurs in the febrile attacks, as well as pain in the groins, along the spermatic cord, and in the testicles. Hydrocele may develop, and the abdominal rings, overstretched by the swollen cords, may give opportunity to the formation of hernia upon the

subsidence of the acute symptoms. The scrotum may become so large as to reach the ground when the patient is standing, and one case has been reported in which it weighed one hundred and ten pounds. One form of the affection is called "lymph scrotum or nævoid elephantiasis," on account of the marked dilatation of the lymphatics.

There are all degrees of thickening of the skin and subcutaneous tissues, but the recurrent attacks of erysipelas and the progressive enlargement are characteristic of all. The bones may become enlarged. This is a very rare affection, which is called "acromegalia." In the *Lancet* of June 11, 1887, several cases are reported, one of which was on exhibition in a travelling show as the "Elephant man." In his case the head attained massive proportions.

ETIOLOGY. The disease occurs in both sexes and in all ages, but is most common in men of middle life and in the dark-skinned races. Moncorvo[1] reports a case in an infant four months old, and speaks of a case in one fifteen days old. He believes that it may develop *in utero*. Floras[2] reports a case beginning at birth and remaining stationary for fifteen years, when it assumed the typical course of the disease. It is particularly prevalent in damp, malarious parts of the seacoast. It is not supposed to be hereditary, though in countries in which it is endemic several members of the same family may be affected by it. Leprosy and elephantiasis have been accidentally associated. Exposure to cold, phlegmasia dolens, cellulitis, ulcers, lupus, repeated attacks of eczema or erysipelas, posture, as the hanging down of a limb on account of rheumatism, pressure upon veins or lymphatics by tumors, may give rise to the disease. In fact, any disease of the skin that is attended by repeated inflammatory outbreaks favors the occurrence of elephantiasis. The filaria sanguinis hominis is said to be the cause of the endemic form of the disease. It is not found in every case, and is rarely encountered in sporadic cases.

[1] Rev. mens. des Mal. de l'Enfance, 1886, iv., 101.
[2] Arch. f. klin. Chirurgie, 1888, xxxvii., 598.

PATHOLOGY. Anything that will occlude the lymphatic or venous channels may cause the disease. In endemic cases it is the ova of the filaria that do this. In sporadic cases the several etiological factors play the same part. However caused, the result is an enormous hypertrophy of the subcutaneous tissue from increase of fibrous tissue in various stages of development. The corium is also increased in thickness, and there is proliferation of the epidermis, enlargement of blood vessels, lymphatics, and nerves. In advanced cases the muscles undergo fibro-fatty changes, and the bones become enlarged. (Crocker.)

DIAGNOSIS. The recognition of elephantiasis is easy, as its symptoms are pronounced. In some cases of *syphilis*, however, an elephantiasic thickening of the foot or feet takes place that may be thought to be elephantiasis. In it, however, there is an absence of the history of repeated inflammatory attacks, the outline of the thickening is rather well defined, and old cicatrices or ulcers characteristic of syphilis will commonly be found. The condition is one of gummatous infiltration with chronic œdema, consequent upon obstruction of the lymphatics.

TREATMENT. The best thing for a patient with endemic elephantiasis to do is to go to a more healthful climate. The treatment of the patient during the exacerbations is purely symptomatic, with fomentations, quinine, iron, and the like. Various measures for the cure of the disease have been proposed, but none is perfectly satisfactory. Of course, the scrotal tumor may be cut off. The leg has been amputated at the hip, a dangerous operation. Unfortunately, the other leg has become diseased soon after the one has been cut off. Ligation of the femoral artery has been performed, but the result has not been satisfactory. Compression by means of a Martin's rubber bandage, or the ordinary roller bandage, will afford relief. When it is left off for a time enlargement will again take place. It, of course, cannot be used while inflammation is present. Bentley [1] has reported the cure of a case by the inunction of a half-drachm of mercurial ointment twice daily, and the application of a firm bandage

[1] Lancet, 1878, i., 785.

for fourteen days. After that the inunctions were made once a day. Internally he gave iodide of potash alone, or in this formula:

℞ Potass. iodid., ℈ij; 1|
Potass. chlor., ʒj; 1|5
Sol. hydrarg. perchlor., ℥ss; 6|5
Inf. chiretta, ad ʒviij; ad 100| M.
Sig. ℥ss (6.5) three times a day.

Galvanism has produced alleviation, if not cure, in some cases. Hardaway has seen great amelioration in one case by the use of Squire's glycerole of the subacetate of lead. Massage is beneficial. Stretching or excision of a part of the sciatic nerve is spoken of by J. Nevins Hyde as having been followed by amelioration of the condition.

Prognosis. Unless the patient is exhausted by the loss of lymph, the disease may last indefinitely without deterioration of the health. Death may result from pyæmia or thrombosis. The patient often dies from some intercurrent affection.

Elephantiasis Græcorum. See Leprosy.

Emphysema of the skin is a rare accident. It usually affects the upper chest and neck, and is due to a rupture of the pulmonary alveoli on account of vomiting or paroxysmal coughing, and the air making its way under the skin. The affected part looks swollen, feels cushiony, and gives a delicate crackling sound on palpation. There will be a history of the sudden occurrence of the swelling after coughing or vomiting, and probably more or less dyspnœa will be experienced. The air slowly escapes and the parts return to their normal condition.

Endemic Verrugas. See Favus.

Endothelioma. Under this title E. Spiegler[1] has reported several cases of tumors that occurred in adult life, upon the scalp especially, but also on other regions. They were present in great numbers and tended constantly to increase in number and in size. They varied in size from a pea to an orange. They projected high above the level

[1] Arch. f. Dermat. u. Syph., 1899, l., 163.

of the skin, and were round or flattened. They were firm and elastic, and were either covered with smooth adherent skin or superficially excoriated or ulcerated. The apposed surfaces of neighboring tumors were often deprived of epidermis, bled slightly, and secreted a sero-purulent, badly smelling fluid, which dried into crusts between the tumors.

FIG. 23.

Endothelioma (Spiegler).

In one of the cases the disease had lasted forty years, and there was a history of the first tumor having appeared after the healing of a cut of the scalp.

Endurcissement du Tissu Cellulaire. See Sclerema neonatorum.

Engelures. See Dermatitis calorica.

Ephelides. See Lentigo.

Ephidrosis. See Hyperidrosis.

Ephidrosis Cruenta. See Hæmatidrosis.

Ephidrosis Tincta. See Chromidrosis.

Epidemic Skin Disease of Savill. See Dermatitis epidemica.

Epidermolysis Bullosa. Synonyms: Acantholysis bullosa (Goldscheider and Joseph); Dermatitis bullosa (Valentine). This is a rare disease, or rather peculiarity of the skin, in which bullæ arise upon the slightest pressure. The disease shows itself in infancy, and occurs especially upon the hands and feet, but may occur anywhere on the body. The tendency to the formation of bullæ lessens toward middle life. The lesions begin either as a red spot, which is itchy, or without precedent redness or other subjective symptoms. A bulla begins to form shortly after the exciting pressure, such as from the shoe in walking, or even friction from a suspender, has been received, and keeps on enlarging for two or three days. It then gradually decreases, dries into a crust, which falls, leaving healthy skin. If the bulla is broken, it discharges a yellow, slightly sticky fluid, and leaves a suppurating base. It may be hemorrhagic. The disease is hereditary in certain families, but it may occur independently of this. It is most pronounced in summer-time. In most cases hyperidrosis is pronounced. Elliot,[1] from his microscopical study of the disease, believes it to be "due in a predisposed individual to an excessive response on the part of the blood vessels to an external irritation, and the consequent pouring out of an enormous amount of serous exudation." He regards it as an "inflammatory process, originating in the cutis itself, and manifesting itself by the formation of bullæ after slight or severe traumatisms." No treatment is of avail.

Epithelialkrebs. See Epithelioma.

[1] Journ. Cutan. and Gen-Urin. Dis., 1895, xiii., p. 10.

Epithelioma. Synonyms: (Fr.) Epithéliome cancroïde; (Ger.) Epithelialkrebs; Cancroid, Skin cancer, Epithelial cancer, Noli me tangere, Rodent ulcer.

Epithelioma is a chronic, progressive, malignant new growth in the skin or mucous membrane, which is characterized by the formation of ulcers with raised, hard, waxy edges, and by a strong tendency to return after apparent removal by knife or caustic.

Symptoms. Epithelioma always begins in a most innocent manner, and may be present for months or years before the patient dreams that he has a serious disease. It may occur upon the skin alone, or upon the mucous membrane alone, or upon both the skin and mucous membrane at their line of juncture. Epitheliomas occurring upon the tongue, larynx, or uterus do not concern us here, as they belong to the domain of surgery. The starting-point of the disease may be a crack or an abraded scaly spot, as on the lip; a small, flat, scaly sebaceous patch; a white, pearly looking, hard nodule; a senile or other wart or papilloma; a pigmentary mole; a cicatrix; an adenoma; a chronic or lupous ulcer; a psoriatic patch, or some other new growth in the skin. Some of these

Fig. 24.

Epithelioma.

(From Prof. G. H. Fox's service at the Vanderbilt Clinic.)

lesions may have been present for many years, as, for instance, a mole. Some appear but a short time before they frankly declare their nature, such as the waxy nodule. However it may begin, it will be noted that the previously

existing lesion more or less rapidly becomes more dense, and after a varying time ulceration occurs, the disease spreads at its edges, and the ulceration grows deeper and deeper, eating its way through skin, muscles, and bone in the infiltrating form, or creeping over the surface in the most superficial form. The lymphatic glands may be involved early in the course of the disease in the deep forms, or not for many years in the superficial forms. Eventually they may become swollen, hard, break down, and ulcerate, assuming the appearance of an epitheliomatous ulcer. A typical epitheliomatous ulcer is irregular in shape, with raised, hard, waxy-looking, rounded, or everted edges, over which, quite commonly, course dilated blood vessels; the floor is uneven, bleeds easily when touched, and is covered by a brownish crust or a sanious, purulent secretion. Epitheliomas are usually single lesions, but they may be multiple. Some years ago there was a patient in Dr. George H. Fox's service at the New York Skin and Cancer Hospital who had scores of epitheliomas developing from large, waxy, reddish nodules scattered all over his face. Sometimes a single epithelioma attains vast dimensions, involving the whole of one side of the face, scalp, and neck in one huge excavated ulcer. Sometimes before the characteristic ulceration develops the new growth may take the form of a single enlarged papilla or a group of them. In some cases it may have a cauliflower-like appearance, spreading out from a more or less narrow base. Fissures are apt to form between the papillæ, and then there is usually an offensive discharge. This is called the papillary form.

Subjective symptoms are absent in many cases at first, but in the deep, infiltrating form pain of a lancinating character is present. This often is so severe that the sufferer is robbed of his sleep. Sometimes [illegible] and the patient experiences only the dis[illegible] to the ulceration. Sooner or later in a [illegible] lancinating pain is a symptom of the di[illegible]

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Subjective symptoms are absent in many cases at first, but in the deep, infiltrating form pain of a lancinating character is present. This often is so severe that the sufferer is robbed of his sleep. Sometimes there is no pain, and the patient experiences only the discomfort incident to the ulceration. Sooner or later in nearly all cases lancinating pain is a symptom of the disease.

The course of the disease is always chronic. Different cases show different degrees of malignancy. Some will prove fatal in four years or less; some will last indefi-

nitely. There is no tendency to recovery, though at times a partial attempt at healing will be made. I have watched one superficial epithelioma in an old Irish woman, in Prof. E. B. Bronson's service at the New York Polyclinic, creep over the skin of the face, healing up in the older parts while spreading ahead. She refused active interference. While all epitheliomas show a strong tendency to return after operation and in the scar left by it, in some cases this tendency is much more marked than in others.

While epithelioma may occur upon any part of the body, it is most frequently located upon the lower lip, where it occurs, according to Paget, in fifty per cent. of the cases. The next most common location is the face. A favorite location upon the face is upon the side of the nose and near the inner canthus of the eye. Here it is very apt to pass over onto the eyelid and destroy it. Not infrequently it begins upon the eyelid itself. The external genital organs of both sexes, and the anal region more rarely, are other common sites. The upper lip is very rarely affected.

It is customary to describe a number of forms of epithelioma, but it seems to me much better, especially for a student, not to encumber his mind with too many names. The superficial, deep-seated or infiltrated, and the papillary forms have already been mentioned. The *chimney-sweep's cancer* is an epithelioma of the scrotum met with in paraffin-workers and chimney-sweeps. The *rodent ulcer* used to be described as a special form of disease, but it is now considered to be an epithelioma. Clinically, it is supposed to be characterized by occurring on the skin of the upper half of the face, by running a slow and painless course, by not involving the lymphatics, and by perpendicular rather than lateral extension.

Etiology. The cause of epithelioma is often obscure. We know that repeated irritation of a part is often followed by its advent. Smoking short clay pipes is not uncommonly followed by epithelioma of the lip; a ragged tooth accounts for many an epithelioma of the tongue; the wearing of spectacles or eye-glasses has in some cases

apparently caused the new growth upon the nose; constant picking or inadequate attempts at the removal of warts and scaly spots would seem to account for epithelioma of the face; and the scratching to relieve pruritus of the anus may play the same part in producing the disease about the anus. This constant irritation would explain the appearance of epithelioma in paraffin-workers and chimney-sweeps, in chronic ulcers, psoriasis, old cicatrices, and the like. A congenital or acquired phimosis and the repeated inflammation due to decomposing smegma are the forerunners of the disease upon the penis. Age is the most pronounced predisposing cause. The disease is rare under thirty years of age, and increases in frequency beyond that period. One case has been reported by Kaposi in the tenth year of life. Heredity has some influence, though D. Lewis has found that it is not so well marked as it is frequently assumed to be. Males are more often affected than females. It seems to have a predilection for all neoplastic growths. The theory that it is due to a specific parasite, and therefore contagious, is gaining ground, but thus far has not been demonstrated.

Pathology. Crocker sums up the pathology of the affection as follows: "The essence of the epitheliomatous process is the development of epithelium and its infiltration into the deeper tissues where it does not normally exist, and where its presence produces irritation and consequent inflammatory changes." "Cell-nests, consisting of horny transformed cells in the center, and of laminæ of flattened epithelium externally, are characteristic of the disease, but are not present in every case, nor is their presence always necessary for a diagnosis." (Robinson.) Some epitheliomas begin in the rete as a prolongation downward of the interpapillary processes; some in the epithelium of the sebaceous or sweat glands, or hair follicles.

Diagnosis. The disease must be differentiated from lupus, syphilis, sarcoma, papilloma, and seborrhœal warts. From *lupus* it differs in an entire absence of brownish lupus tubercles; in beginning late in life, as a rule, while lupus begins in early life; by its comparatively more rapid course; its lancinating pain; the involvement of the

lymphatic glands; the deep ulceration; the waxy, raised, hard margin; and the development of the cancerous cachexia. From *syphilis* it differs in having a single and not a multiple lesion; in its slower course; in its showing no tendency to recovery; in its not responding to internal treatment; in its painfulness; and in its waxy, raised, hard margin. An *initial lesion* of syphilis on the lip has not infrequently been taken for an epithelioma. In it we have more rapid growth, more induration, an early enlargement of the neighboring lymphatic glands of peculiar hardness, and the appearance of secondary eruptions on the body, all of which are wanting in an epithelioma. *Sarcoma* usually occurs earlier in life, tends to more rapid development with metastases in neighboring or distant parts, and either does not ulcerate or ulcerates in a very different way than does epithelioma. From *papilloma* and *seborrhœal* warts there are no positive diagnostic marks of distinction. Either of the two diseases appearing late in life or showing symptoms of activity at that time should rouse our suspicions.

TREATMENT. Complete and radical destruction of the disease is the only thing to be done in the treatment of epithelioma. As a prophylactic measure, it is well to destroy all suspicious warts appearing after middle life, and to apply appropriate treatment to seborrhœal patches occurring at the same period. Superficial caustics should never be used to an epithelioma, as they only encourage its growth. The radical treatment will differ with the point of view, all surgeons inclining to the knife, while dermatologists advocate the curette or powerfully destructive caustics. If the knife is used, it must cut out a wide margin beyond the growth. Extirpation is especially applicable, and the most appropriate treatment for epithelioma of the lip, eyelids, and penis. In the latter the organ must be amputated above the ulcer, if that has attained any size, and the inguinal glands likewise taken out. In all cases in which the lymphatic glands have become involved they should be taken out. Therefore when the lymphatic glands are involved only excision is to be thought of.

To all superficial epitheliomas and to many of the infiltrating variety Schwimmer's plan of treatment will be applicable, and will prove curative. The growth is to be scraped out thoroughly with the dermal curette (Fig. 25); the diseased tissues will give way readily; the bleeding is to be stopped by pressure; and a pyrogallic acid ointment of 33⅓ per cent. strength is to be applied. Care should be taken that it be applied exactly to the growth, for though it exerts its greatest action upon the diseased tissues, it also acts upon the sound skin. This ointment will produce a black crust over the growth, on account of oxidation of the acid, and will cause a free discharge from the scraped surface during a few days. The discharge becomes less by degrees. After a week or ten days the

FIG. 25.

The dermal curette.

black crust is to be removed by covering it with carbolized vaseline for twenty-four or forty-eight hours. Last of all, mercurial plaster is to be applied, under which the part will heal. This method gives most satisfactory results, and is not particularly painful if cocaine is used hypodermically before the scraping. Smaller epitheliomata can be curetted without using cocaine. After curetting, the base should be bored into with a point of nitrate of silver.

Arsenic holds the first place among caustics. Marsden's paste, composed of one or two parts of arsenious acid and one part of gum acacia, by weight, rubbed together and mixed with a twenty to forty per cent. aqueous solution of cocaine into a paste of the consistency of butter just before using, is perhaps the most often used. It is dreadfully

painful and often causes great œdema. Before applying an arsenical paste, if ulceration has not taken place, the epithelium should be curetted so as to leave a new surface. It should be applied to the affected part on linen, the paste overlapping the edge of the tumor by half an inch, and left on for twelve to twenty hours, according to the patient's endurance and the effect produced. The patient should be seen frequently, and the paste removed as soon as a greenish or blackish eschar is formed. Poultices are to be applied after the paste, and kept on continuously till the slough separates, and then simple ointment used. The slough may not fall for weeks, and when it does a clean surface is exposed that soon completely heals. It is to be noted that the use of a strong arsenical paste is much safer than a weak application, as it produces so much inflammation and destruction of tissue that the arsenic is not absorbed. Arsenic is better than some other caustics, as it attacks by preference diseased cells and leaves the sound skin almost unharmed. If the growth has not been destroyed, the process may be repeated. This is the treatment recommended by A. R. Robinson.[1] D. Lewis[2] has had good results from using Bougard's paste, as follows:

℞ Wheat flour, Starch, āā 60
Arsenic, 1
Cinnabar, Sal. ammoniac, āā 5
Corrosive sublimate, 50
Solution of chloride of zinc @ 52°, 245 M.

The first six ingredients are separately ground to a fine powder and mixed in a mortar. Then the solution of zinc is slowly added while the mass is stirred. It is to be kept covered in an earthen jar. A portion is to be applied accurately to the part and kept on for thirty hours, and followed by a poultice. Cocaine, 20 per cent., may be added to decrease the pain. Another method of using arsenic is known as Cerny's. He uses:

[1] Atlantic Med. and Surg. Journ., 1895–6, xii., 713.
[2] Journ. Cutan. and Gen.-Urin. Dis., 1890, viii., 70.

℞ Acid. arsenios. pulv., gr. xv; 1
Alcohol. ethyl. absolut., } āā p. æ. ad 150
Aquæ destillat., }

The solution is to be shaken up and painted over the denuded surface of the epithelium, and a new coat laid on when the first is dry. It is used daily unless œdema is caused, when a pause is made until this subsides. After a time an eschar forms and falls. Then apply the solution again to the surface, and if only a yellowish crust forms that can be removed without bleeding a cure has been effected. If a dark adherent crust forms, repeat as before. Healing at last is effected under ten per cent. boric acid in vaseline.

Lactic acid is another powerful caustic, to be applied by mixing it with an equal part of finely powdered silica and spreading it upon gum-paper. It is kept on for twelve hours, and renewed twenty-four hours afterward. Hardaway prefers to apply the syrupy acid by means of absorbent cotton for ten or fifteen minutes, and then wash off the excess of acid with water. This is done daily. Caustic potash is recommended by A. R. Robinson for epithelioma of the lip.

The thermo- and galvano-cautery may also be used. Resorcin has its advocates, as have chloride of zinc and the nitrate of silver. These may be of service where, for any reason, a more radical operation is not admissible. Fuchsine and methyl-blue, either injected under the skin or locally applied, will sometimes seem to stay the progress of an epithelioma, but will not cure it.

There are some cases that are too advanced for any active interference, and then palliative remedies only are permissible.

Prognosis. The prognosis of epithelioma as to life is fairly good. While, as already said, there are some cases that are rapidly fatal, many do not seem to have any effect on the patient's health for years. The prognosis as to cure is always doubtful. Some cases, whether excised or destroyed by other means, will return after a time. If they do return, they must be destroyed again.

Epithelioma Contagiosum. See Molluscum.

Epithelioma, Multiple Benign Cystic. Under this title Fordyce[1] places those cases formerly described under the names of hydradénomes éruptifs, syringo-cystadénome, epithelioma adenoides cysticum, and others, and reports two additional cases. It is characterized by the eruption of small, pale-yellow, pearly, pinkish, brownish, or reddish-brown tumors from pinhead- to pea-sized, that are located on the face, chest, back, and upper extremities. They are firm to the touch, and painless. Some of the tumors are tense, shiny, freely movable, sometimes with a central depression. Some are translucent, like vesicles; some look more like milia. They slowly increase in number, the individual tumors enlarging to the size of a pea and then remaining stationary. The disease has no effect on the general health. In some cases it seems to be hereditary. It always begins in early life.

Microscopic examination shows the tumors to be made up of irregular masses and tracts of epithelial cells, and "cell-nests." Colloid degeneration of individual cells is also seen in the cell-masses. There are also a down growth and proliferation of the epidermis and external root-sheath of the hair follicle. It is supposed that the growths are due to misplaced epithelial cells of indifferent nature. (Fordyce.) Their treatment is by curetting.

Epitheliomatose Pigmentaire. See Atrophoderma pigmentosum.

Equinia. Synonyms: Glanders; Farcy; Malleus; (Fr.) Morve; (Gr.) Rötz.

A contagious, specific disease, with general and local symptoms, derived from the horse, ass, or mule.

This is a rare disease in the human race, and runs an acute, subacute, or chronic course. It is derived by inoculation with the bacillus mallei, and its symptoms show themselves in from three days to six weeks afterward. Its constitutional symptoms are fever, prostration, constipation, and rheumatic pains, with the subsequent development of a typhoid condition in which the patient dies. The objec-

[1] Journ. Cutan. and Gen.-Urin. Dis., 1892, x., 459.

tive symptoms are a profuse purulent or sanious nasal discharge; chancroidal ulceration at the site of entrance of the poison; phlegmonous inflammation of the affected part; adenitis; and a cutaneous efflorescence. The latter is a disseminated eruption of red macules, which develop into yellow papules, upon which variola-like pustules and bullæ may form. These may coalesce into superficial ulcerations and gangrenous patches. The skin is swollen and red, and often crusted with the discharge from the pustules. Infiltration of the subcutaneous tissues may occur and deep sloughs may form. There may be a general adenitis, and the glands may break down and form ulcerating cavities. The whole skin may be involved in these destructive processes. It may run an acute or chronic course.

Treatment is usually unavailing, and is on general principles. The prognosis is bad. The more acute the symptoms the worse the outlook.

Erbgrind. See Favus.

Erysipelas. Synonyms: (Fr.) La rose, Feu sacré; (Ger.) Rothlauf, Rose, Hautrose, Wundrose; (It.) Risipola; St. Anthony's fire, Wildfire, Rose.

An inflammatory disease of the skin or the adjacent mucous membranes, attended always with redness and swelling, and often with vesicles, bullæ, pustules, diffuse suppuration, and gangrene; and characterized by a tendency to spread at the periphery and by fever. (Foster.)

Symptoms. Though the most modern pathology teaches that erysipelas always originates in or about a lesion of the skin or mucous membrane, and is therefore allied to if not identical with the same disease as met with in surgical and lying-in wards, so-called surgical erysipelas will not be considered here. The outbreak of the disease, as met with apart from the surgical form, is usually preceded for a day or so with malaise, and the attack is often ushered in with a chill, pyrexia, and vomiting. The fever is present throughout the whole course of the disease, excepting in the most mild type, when it may soon subside. The thermometric range is from 101° to 105.5° F. There

will be other signs of constitutional disturbance, such as a coated tongue, a quickened pulse, either full, soft, and compressible, or, in bad cases, small and weak; headache, drowsiness, or, in bad cases, delirium; and sometimes albumin is found in the urine.

The most frequent location of the disease, so far as we now are concerned, is the head and face, though it may occur anywhere on the body. The eruption begins usually as a single patch, which is at once rosy red, swollen, sharply defined, irregularly shaped, hot to the touch, and, at first, with a smooth glazed surface. The redness may be pressed out with the finger, leaving a yellow stain, but promptly returns when the pressure is removed. The patch enlarges, creeping with more or less rapidity over the surface, always preserving its sharp, ofttimes indented border that is raised toward the sound skin; it becomes of a darker hue, sometimes livid; and very commonly, though not uniformly, vesicles or even blebs form on it. These latter may become purulent, and breaking, discharge their contents upon the surface, which dry into crusts. As the process extends the central portion becomes flattened and less red. Sometimes new patches may appear, and coalesce with the original patch. Sometimes, while spreading peripherally, there may be a recrudescence in the older parts. The area of the disease may be limited or may include the whole body. Very often it seems to be checked by the line of the hair, whether of the beard or scalp. Not uncommonly it invades the hairy parts, involving one-half or the whole of the scalp and extending down upon the neck. Then the patient's appearance is indeed deplorable. His lips are swollen and livid, his eyelids are swollen so that the eyes cannot be opened, and his head seems enormously enlarged. At times there may be a lighting up of the disease on a distant part of the body, as on the arm with erysipelas of the face. The lymphatics and the lymphatic glands are involved. The former often show themselves as red streaks. The glands may suppurate, and gangrene of the skin may declare itself. All grades of inflammation may be reached. Sometimes the disease is but slight, sometimes very severe, the constitutional symp-

toms keeping pace with the severity of the local symptoms. The duration of the disease may be six or seven days, or two or three weeks. The patient is always more or less prostrated by it, though many of the cases we see are ambulant cases.

The subjective symptoms are burning, tingling, itching, and tension. The parts are often tender, and may be spontaneously painful.

The disease quite commonly begins about the nose, and may invade the mouth. Occasionally it spreads rapidly over the surface as an advancing, broad, rosy-red, raised line. Sometimes recurrent attacks occur at short intervals; generally the disease does not recur. When the scalp is invaded the hair commonly falls during convalescence. Sometimes some lesion of the skin may be found as the starting-point of the inflammation, or perhaps some lesion of the mucous membrane of the nose, mouth, or ear. In the recurrent attacks the nose is quite commonly the peccant member. But in a very large proportion of cases no lesion at all will be discoverable. When the disease subsides the skin desquamates, and returns at last to the normal condition.

Erysipelas occurring upon the trunk or extremities presents pretty much the same symptoms as when occurring upon the face.

ETIOLOGY. It is now generally accepted that the disease is infectious, and caused by a specific micro-organism that was described by Fehleisen.[1] This gains access to the body through some lesion of continuity of the skin or mucous membrane, however minute that may be. It therefore sometimes follows boils, tubercular ulcers, eczema, and other skin diseases. As in many of the bacterial diseases, so in this one, it is probable that the patient must be in the proper condition of health, or rather ill-health, for the lodgement of cocci. One attack predisposes to another attack. It is more frequent in women than in men; and in winter than in summer. Intemperance, Bright's disease, parturition, and a lowered state of nutrition predispose to it. While the contagiousness of sur-

[1] Deutsche Zeitschrift f. Chirurgie, 1882, xvi., 391.

gical erysipelas is well known, and commonly observed, it is rare to meet a case of facial erysipelas traceable directly to contagion. The possibility of the occurrence of the disease without infection by the micro-organism is still entertained. It has been thought to arise from taking cold or to begin in some circumscribed purulent deposit.

There is nothing specific about the *pathological anatomy* of the disease.

Diagnosis. If the clinical features of the disease are kept in mind, the sharply defined, swollen, red patch advancing with more or less steadiness over the surface, the process being preceded by a chill and accompanied by marked constitutional disturbance, there is little danger of mistaking it. It may, however, be mistaken for an acute erythematous eczema, an erythema, or so-called giant urticaria. In *eczema* the parts are not so swollen; the margin of the patch fades into the surrounding skin; the color is not so brilliant; the surface is rougher and more scaly; there is decided itching and a lack of constitutional disturbance of any magnitude. *Erythema* lacks the constitutional symptoms of erysipelas; the redness fades completely away under pressure, without leaving a yellowish stain, and springs back promptly when the pressure is removed; it does not creep over the skin; and it is of short duration. In *urticaria* there will usually be well-marked wheals or a history of them; great itching; no tenderness; a short course; a history or evidence of digestive disorders, and an absence of marked constitutional disturbance.

Treatment. The great variety of remedies that have been vaunted for the cure of erysipelas evidences the fact that most cases recover of themselves. There are not a few competent observers who are skeptical of the real efficacy of any local treatment. As the disease tends to lower the vitality of the patient, we should strive to support his strength by a most nutritious diet, and by alcoholic stimulants in adynamic cases. The internal medication will be symptomatic to a large extent, by means of aconite, quinine, antipyrine, phenacetine, and the like. The tincture of the chloride of iron, in twenty- to sixty-minim doses every two or three hours, is regarded by many as a

specific, and should be given in all but the slightest cases. Jaborandi by the mouth, or pilocarpine, one-sixth to one-quarter of a grain hypodermically, have their advocates, but must not be thought of in debilitated subjects.

The local treatment is very important. If there is a wound present, it should, of course, be thoroughly disinfected on surgical principles. The lead-and-opium wash is an old remedy, and has proved useful in very many cases. It is composed of

℞	Liq. plumbi subacetat. dil.,	ʒj–iij;	4–12	
	Tinct. opii,	ʒij–iv;	8–16	
	Aquæ,	ad Oj;	ad 500	M.

It may be used hot or cold, whichever is most agreeable to the patient. Dry heat will also relieve the discomfort of the patient. Resorcin in watery solution of two or three per cent. strength seems at times to cut short the disease. Duckworth[1] commends chalk ointment, made of equal parts of melted lard and chalk, with or without a half-drachm of pure carbolic acid to the ounce. This is to be smeared on thickly and covered with plain or boric lint. White-lead paint has done well in some hands. White[2] expects to cure his cases of ordinary facial erysipelas by keeping the part constantly covered with cloths saturated with the following:

℞	Ac. carbolici,	ʒj;	4	
	Alcohol., }	āā Oss;	āā 250	M.
	Aquæ, }			

It may be used every alternate hour. Carbolic acid may also be used in oil, ten per cent. strength, and rubbed in every hour. Piffard recommends the external use of:

℞	Tinct. belladonnæ,	1 part.	
	Glycerini,	1 "	
	Aquæ,	8 parts.	M.

Shoemaker is fond of the ointment of the oleate of bis-

[1] Practitioner, January, 1887.
[2] Trans. Amer. Dermat. Assoc., 1890, p. 42.

muth. Ichthyol, in twenty-five to fifty per cent. aqueous solution, is one of the best applications, the only objections to it being its disagreeable odor and dark-brown color. The parts should be constantly covered with it.

The treatment by scarifications about the patch, the incisions being made diagonally, partly in the sound and partly in the diseased skin, and then covered with gauze wet with a solution of bichloride of mercury, 1 : 1000, is known as the Kraske-Riedel method, and should be always thought of in grave cases. Woelfler[1] recommends compression of the border-line by adhesive-plaster strips, the disease seldom spreading beyond the constricting band. This is specially applicable to erysipelas of the limbs. Painting with nitrate of silver all around the patch has also been done, with the idea of checking its spread.

Prognosis. Many cases of erysipelas recover of themselves in a few days, while others may run a course of weeks. The prognosis may be said to be good in most cases; but even in those that begin as mild ones we should be on the watch for grave symptoms. When the scalp is affected the prognosis is more grave than when the face alone is the seat of the disease. When the patient is the subject of chronic alcoholism, or Bright's disease, or is in the puerperal state, the prognosis is bad.

Erysipeloid is a term employed by Rosenbach to designate an erysipelas-like eruption unattended by constitutional symptoms. It is also called chronic erysipelas and erythema migrans. It originates in a wound, is due to infection from some dead, putrefying animal substance, and chiefly affects cooks, butchers, fishmongers, and the like. It occurs mostly on the fingers, and spreads from the point of inoculation as a dark-red, often livid swelling with a sharp border. As it travels over the surface the central portion undergoes involution, and thus circles or scalloped patches may be formed. It stops spontaneously after from one to six weeks' duration. There is marked itching or burning during the whole course of the disease. It is distinguished from true erysipelas by the mildness of

[1] Wien. klin. Wochenschr., 1889, Nos. 23 and 25.

its symptoms. A salicylic acid or other antiseptic ointment may be used in treatment.

Erythema. Synonyms: Dermatitis erythematosa, Erysipelas suffusum; (Fr.) Erythème, Dartre érythémoïde; (Ger.) Erythem, Hautröthe; Rose rash.

Erythema may be passive or active. The former is familiar as lividity of the skin, and the latter as blushing.

There are many forms of erythema as a disease, but they may all be classed under one of two main varieties, namely, Erythema hyperæmicum and Erythema exudativum. I shall follow Crocker's classification, as it is a practical one. It is a question whether erythema should be regarded as a disease or a symptom.

- **Erythema**
  - E. hyperæmicum
    - 1. Due to external causes
      - E. simplex.
      - E. pernio.
      - E. intertrigo.
      - E. læve.
      - E. paratrimma.
    - 2. Due to internal causes
      - E. fugax.
      - E. urticans.
      - E. roseola.
      - E. scarlatiniforme.
  - E. exudativum
    - E. multiforme.
    - E. seu Herpes iris.
    - E. nodosum.
    - E. gangrænosum.

Erythema Hyperæmicum.

This form of erythema is characterized by simple redness without swelling, and usually is not followed by desquamation. This shows that it is due simply to a localized hyperæmia without inflammation. It is always of short duration. The redness disappears under pressure, but springs back again as soon as the pressure is removed. It occurs either in circumscribed patches of large or small size, or diffused over large areas. Subjective symptoms are often hardly noticeable. There may be some burning and tenderness, but there is never decided itching. The patient may rub his skin gently, but never scratches violently. In cases due to internal causes there may be slight constitutional symptoms with fever of mild grade, or some digestive disturbance; but these are not properly symptoms of the erythema, but rather of the underlying

[redacted]

[redacted]

[redacted]

common about the inside of the thighs, where the wet napkins cause and aggravate it. It is very often accompanied by a disagreeable, cheesy odor, and, contrary to what obtains in other erythemas, there is moisture upon the skin in some cases.

DIAGNOSIS. The diagnosis from *eczema* is very often difficult. Indeed, eczema and erythema run into each other so imperceptibly at times that it is difficult to tell where the one leaves off and the other begins. But eczema itches more than erythema, it tends to spread further beyond the affected part, and its exudation is not only sticky, but also stains and stiffens linen. The location in the skin-folds should suggest an intertrigo. Happily, the differentiation is a matter of no great importance, as the same treatment is applicable to both.

In infantile *syphilis* we frequently have an eruption upon the buttocks and inside of the thighs that bears a decided resemblance to intertrigo. Here a correct diagnosis is of great importance. In syphilis the redness commonly extends down the whole inside of the legs to the feet and soles, it is of a darker color, and there will be other symptoms of the disease, such as snuffles, large or small papules to the outside of the red patch, mucous patches, and the like. In infant asylums, where a great number of debilitated as well as syphilitic children are received, opportunities for the differentiation between syphilis and intertrigo frequently occur.

TREATMENT. The treatment of intertrigo is simple. The apposing surfaces of skin must be separated by pieces of gauze or muslin, the furrows must be kept perfectly clean, and dusting powders of starch, talc, lycopodium, and the like, must be freely used. To these powders oxide of zinc, boric acid, or other astringents may be added, the compound stearate of zinc being one of the best applications. Hardaway recommends:

℞ Thymol., gr. j;
Pulv. zinci oleat., ʒj; 32 M. ℥06

As a rule, powders answer better than ointments, though Lassar's paste, as given under Eczema, may be used.

Lotions, such as calamine lotion, and a saturated solution of boric acid, are preferable to ointments. The treatment of intertrigo in infants is to be managed in the same way as eczema. (See under Eczema infantile.)

Erythema Lævе is an obsolete term, which was employed to indicate the redness seen on œdematous limbs.

Erythema Paratrimma belongs to the same category, only here it is the redness over bony prominences, as that preceding a bedsore.

We have now to consider the second group of erythema hyperæmicum, those erythemas which are due to internal causes. Here might be placed all the exanthematous fevers, as well as the drug-eruptions. But the first of these belongs to the domain of general medicine, and the last will be found under Dermatitis medicamentosa.

Erythema Fugax is, as its name indicates, a fugitive erythema—as it were, a prolonged blush. It is seen most often in children with some digestive disturbance, and its chosen location is the face. It lasts for a few moments or hours, and is seldom seen by the physician, although he will be told, not infrequently, by patients that they are annoyed by a flushing of the face after eating, exposure to cold, or mental emotion. It is to be managed like Urticaria, which see.

Erythema Urticans is simply the first stage of urticaria. The term should be dropped.

Erythema Roseola, or simply roseola. While children are more subject to this form of erythema than adults, it may occur in the latter. Most commonly it affects the whole body, but it may be localized. As it is due in most, if not all, cases to digestive disorders or other constitutional disturbance, it is usually ushered in with a rise of temperature, which may be pretty sharp, 103° or 104° F., furred tongue, restlessness, and the like. Soon the eruption appears, which may be a blotchy redness, or in faintly marked papules, or in rings or gyrate figures. The eruption lasts a few hours only, or, coming and going in differ-

ent places, it may be prolonged for a few days. Besides digestive disorders, gout, changes of temperature, and the seasons of spring and autumn have been assigned as causes.

DIAGNOSIS. In itself it is a matter of little moment, but as it resembles scarlet fever, rötheln, and measles, its diagnosis is important. It differs from *scarlatina* in not having such severe constitutional symptoms; in an absence of the strawberry tongue, swollen, reddened fauces, and enlarged glands; in the rash coming out all over the body without following any regular course of development from the neck downward; in the eruption being blotchy or papular, and not a diffused redness. After watching the case for a day the diagnosis will be evident by the clearing away of the disease wholly or partially. It differs from *measles* in an entire absence of catarrhal symptoms, and in its eruption not being crescentic, as well as in the irregularity of its course, the mildness of its symptoms, and the brightness of its color. It bears most resemblance to *rötheln*, and probably the two are often confounded. If there is a clear history of contagion, or more than one member of the family affected at the same time, the diagnosis of rötheln is at once established. Rötheln is more pronounced on the extremities, and the lesions are of a more stable character. In case of doubt as to diagnosis of roseola the patient should be regarded as having a contagious disease, isolated, and carefully watched.

TREATMENT. Little need be done for the patient but to give a laxative, and to relieve symptoms.

Erythema Neonatorum makes its appearance in the first few days of life, and is thought to be due to the influence of external and unusual irritants acting upon the tender skin of a newborn child. "The eruption consists of very minute red papules, seated upon a hyperæmic base, which can be made to lose their color upon pressure. The lesions are most pronounced upon the back and breast, and fade away in a few days with slight desquamation of the most congested spots. The mucous membranes are unaffected, and there is no evidence of systemic reaction." (Hardaway.)

Erythema Scarlatiniforme. A scarlatina-like erythema follows the ingestion of a number of drugs, and has been frequently mentioned in the section on Dermatitis medicamentosa. The French authors describe a scarlatiniform erythema under the name of erythèmes scarlatiniformes récidivantes, which, according to Besnier,[1] who has published an excellent study of the affection, was first described by Fereol in 1876, at the Société médicale des Hôpitaux de Paris. The disease is marked by redness, desquamation, and relapses. Its outbreak may or may not be preceded for one or two days by malaise and slight febrile movement. It begins on the trunk and invades the whole surface in a few hours or in two days. It is a diffused, uniform, intense, scarlatinal or somber-red eruption. There may be slight differences in the shade of color, or the redness may be punctate, or some pinhead-sized vesicles may develop upon it. Sometimes the eruption is limited to a certain portion of the body; sometimes the eruption is general, but not universal, normal islands of skin being found in the general redness. It comes out in patches that run together. There is generally redness of the mucous membrane of the mouth and fauces. There is no thickening of the skin nor infiltration of mucous membranes. The skin burns, and there may be itching. Exfoliation of the skin begins almost as soon as the eruption is out, commencing at the point of invasion. The desquamation is general, and may be furfuraceous, or abundant and in large plaques. Upon the scalp it is furfuraceous. The whole process may take but one or two days, or it may be prolonged for a month or six weeks. The hair and nails may be shed. The tongue is furred, and may desquamate, but never presents the papillæ of scarlatina. After the beginning of the attack there is usually no fever, and the appetite is preserved. There may be albuminuria during the attack. The relapses, which are apt to occur after intervals of days, months, or years, are less pronounced and the patient's health is good in the interim.

ETIOLOGY. The cause of the disease is very often

[1] Ann. de derm. et de syph., 1890, i., 1.

obscure. The first attack has been observed to follow exposure to cold, the application of mercurial ointment, or the action of some other irritant. But it is difficult to explain why from such causes relapses should occur. Besnier thinks that in some cases the cause is a poison developed within the individual. In this way he would explain some of the erythemas developing during an acute urethritis, which some observers claim may arise independently of the taking of copaiba. Scarlatiniform erythemas occur occasionally in septicæmic conditions, in typhus fever, in malaria of children, in sewer-gas poisoning, and in various other conditions.

DIAGNOSIS. Brocq considers scarlatiniform erythema as one form of *dermatitis exfoliativa*, but it is distinguished from it by an absence of evening rise of temperature, by having no permanent effect upon the health, by running a shorter course, and by the skin not being dry, contracted, and shrivelled. It differs from *scarlatina* in the mildness of its constitutional symptoms; by the course of the eruption; by the absence of tumefaction of the fauces and the strawberry tongue; by the early desquamation; by not being contagious; and by its tendency to relapse. If there is any doubt as to the diagnosis, the patient should be isolated. It differs from erythematous *eczema* in an entire absence both of thickening and moisture; in being less itchy; and in its rapid course.

TREATMENT. The treatment is purely symptomatic.

ERYTHEMA EXUDATIVUM.

The second variety of erythema differs from erythema hyperæmicum in the presence of an exudation into, not on, the skin, so that the patches are raised above the level of the skin, and in never involving the whole surface, but always occurring in circumscribed patches. It is an inflammatory disease. Its several varieties are alike in that the redness disappears under pressure, to return at once when the pressure is removed. It is probable that erythema nodosum is really but a part of erythema multiforme, as the two forms may be present at one time. But it is

usually described apart, and although this may not be strictly accurate, it is convenient.

Erythema (*Exudativum*) *Multiforme*, as its name indicates, is very multiform in its efflorescences. For a day or a few days before they appear there is some constitutional disturbance. This may be nothing more than slight malaise, the patient not feeling as well as usual. From these indefinite symptoms there are all grades up to fever of 104° F., headache, gastric disturbances, and severe muscular and articular pains, like rheumatism. According to Besnier and Doyon, an erythema of the pharynx, or a pharyngitis, laryngitis, or bronchitis, often precedes or accompanies the outbreak of the eruption upon the skin. The eruption is most constantly seen upon the backs of the hands and feet, and here it commonly begins, though this is denied by Polotebnoff, to whom we are indebted for a most exhaustive and able study of erythema.[1] It also appears on the trunk and extremities more or less generally, coming out in crops, and preserving a rough symmetry. Sometimes it may remain confined to a single region, as the backs of the hands. Sometimes it occurs on the mucous membranes, as of the mouth and eyes. It is usually most marked and abundant about the joints should they have exhibited rheumatic pains. It is rare not to find lesions upon the backs of the hands. With the appearance of the eruption there is a subsidence of the constitutional symptoms, though in many cases the patients are more or less definitely ill during the whole course of the disease.

The eruption commences as a group of deep-red papules from pinhead- to pea-size, conical or rounded, and this is called *erythema papulatum*. The eruption may continue as such; or the papules may coalesce and form elevated patches, sharply marked against the sound skin; or they may enlarge to the size of tubercles, thus forming *erythema tuberculatum*. If they still continue to enlarge, they become depressed in the center and ring-shaped, the periphery being deep red while the center is purplish. This is called *erythema circinatum* or *annulare*. Sometimes it happens

[1] Zur Lehre von den Erythemen. Hamburg, 1887.

that the ring still enlarges by successive exudations, and then there will be ring within ring, the outer one pink, the next red, the next purplish, thus forming an iris-like play of colors that has been termed *erythema iris*. Two rings near each other and enlarging will after a time meet at their peripheries, the points of contact will melt into each other and disappear, and there will form a large patch with a figure-of-eight or scalloped, raised border, and a flattened center. This is called *erythema marginatum*. It may travel over a large part of the trunk or the circumference of a limb, leaving a fawn-colored pigmentation, which soon fades. Or two rings meet, and each breaks, and only a gyrate line is formed, to which the name of *erythema gyratum* is applied. Sometimes, though rarely, the exudation is so abundant that the epidermis is raised in the form of vesicles or bullæ. This is *erythema vesiculosum* seu *bullosum*. Hemorrhage may take place into the bullæ.

It is uncommon to find all these forms present at the same time, nor must it be understood that one form necessarily evolves into the other. The evolution may stop at any stage; most often at the papular stage. Nevertheless, more than one form is usually to be seen, so that the term multiform is merited. Crocker says that in children multiformity is less the rule, the constitutional symptoms are more pronounced, and if vesiculation occur the vesicles are more prone to become purulent and leave scars.

The duration of the disease is from two to four weeks, but it may be extended by a succession of outbreaks for months or years. The eruption is attended by burning rather than itching, and sometimes by a feeling of tension. Slight pigmentation may be left, but it is transitory. Desquamation may follow the eruption, but it is not common. In some patients there is a decided tendency to relapse at irregular intervals for years. In Prof. George Henry Fox's service at the Vanderbilt Clinic I have seen a boy with a relapsing bullous erythema of the face and ears that had appeared at intervals during ten years. The bullæ were of large size, fully distended, and of irregular shape. They left depressed, pigmented cicatrices in some places. Similar cases have been reported by others, as,

for instance, by Hardaway, who saw one case with relapses for four years; and T. C. Fox, who saw two cases with a duration of sixteen years in each case.

As complications of erythema multiforme, and especially of erythema nodosum, have been reported endo- and peri-carditis, meningitis, pleurisy, pneumonia, and the like; but it is better to regard these diseases not as complicating the erythema, but as the primary diseases of which the erythema is a phenomenon.

Erythema Iris. This very rare disease was formerly regarded as a herpes, and is described in many text-books as *herpes iris.* Its other synonyms are hydroa, herpes circinatus, and hydroa vésiculeux. It is only a form of erythema multiforme. It is seen sometimes along with other manifestations of erythema multiforme, or with herpes, though it usually occurs alone. It is located most often upon the backs of the hands and feet, and upon the arms and legs, but it may occur anywhere upon the skin as well as the mucous membranes. I have seen one case upon the buttocks as well as upon the elbows. According to Crocker, there are two varieties of the disease, one with a central vesicle or a purplish depression surrounded by one or more whitish rings slightly raised up by effused fluid; the other with a central bulla with one or more rings of more or less discrete vesicles round it. Of these two, the first is the more frequent.

The first variety begins as a small erythematous papule upon which a pinhead-sized conical vesicle forms in about twelve hours. The vesicle grows larger and flattens, but preserves a red areola. When about a quarter of an inch in diameter the fluid is absorbed in the center, leaving a purplish depression; or only a ring of absorption occurs, so that there will remain a vesicle in the center with a purplish zone about it, then a raised white ring, and around all a narrow pink areola. This play of colors gives the name of iris. The patch may reach the diameter of half an inch, and then undergo involution; or several patches may unite and form patches of one inch or more in diameter, and hemorrhage may take place into the bullæ that may form.

In the second variety, which is the *hydroa vésiculeux* of Bazin, round a central bulla a ring of split-pea-sized vesicles forms, the vesicles being either discrete or touching. A second or a third ring of vesicles may form outside of these, the skin between them being of a purplish tint. The bullæ and vesicles may leave scars. Crusting also takes place from the breaking or drying of the vesicles.

The lesions of both varieties are more or less symmetrical, though a patch may develop on one side several days before the other. The duration is from three to four weeks or longer. Relapses are common. Burning is usually pronounced, and there may be some itching. From this description it will be seen that the so-called herpes iris is really an erythema.

Erythema Nodosum, also called dermatitis contusiforme, and érythème noueux (Fr.), is more common than erythema iris, but not nearly so common as erythema multiforme. It is only a variety of erythema multiforme, as it may occur as a part of that disorder. In the vast majority of cases it occurs alone. Its prodromal symptoms are substantially the same as those of erythema multiforme, but its rheumatic pains are more pronounced and nearly always present. There are also tenderness and pain over the tibiæ. After a few days of prodromata, round or, more often, oval, bright or rosy-red swellings appear over the tibiæ, with their long axis vertical. These are from nut- to egg-size; raised; their borders merge gradually into the surrounding skin; they are painful and often exquisitely tender; firm at first, but may be semi-fluctuating afterward; and their color darkens to a dark red, then purple, and in undergoing absorption they present the appearance of a black-and-blue spot from a bruise. The color at first disappears under pressure, to spring back when the pressure is removed. The changes of color subsequently seen are due to the gradual absorption of the coloring-matters of the blood deposited in the tissues. There are usually not more than a dozen lesions, generally less. They are most frequently located over the tibiæ, but may occur as well upon the arms, scapulæ,

thighs, and mucous membranes. They are roughly symmetrical. The duration of the disease is, like that of other erythemas, two to four weeks.

Etiology. The causes of erythema exudativum are not fully determined. It is probably due to some toxic condition of the blood, which may develop in the individual or be derived from without. It occurs more commonly in women than in men, and in young adults rather than in old people, while erythema nodosum is said to be most frequent in children. It is most frequent in the spring and autumn seasons, in which dampness and cold winds prevail, and sudden changes of temperature are common. The papular erythema is very often seen in recently arrived immigrants. Rheumatism has a well-marked causal relation to erythema nodosum, and, it may be, to the other forms. Syphilis seems to be an etiological factor of some weight in the production of erythema nodosum. Some years ago I saw in the service of Prof. E. B. Bronson, in the New York Polyclinic, a well-marked instance of this in the course of recent syphilis in a woman. Many cases seem to be due to systemic poisoning either by some infectious disease or by auto-infection. Some authorities are of the opinion that such cases should be separated from erythema exudativum, and propose the name of polymorphous erythema. It is seen with cholera, influenza, and the exanthemata; with indigestion, pregnancy, parturition, menstrual disturbances, kidney diseases, and various other internal or systemic disorders. Sometimes the disease seems to be a pure angio-neurosis. Cases of erythema multiforme recurring with recurring attacks of gonorrhœa have been reported. These appear as reflex angio-neuroses without the ingestion of balsamics in the treatment of the urethritis. Cases of erythema multiforme not infrequently follow the ingestion of drugs; at least they are almost identical with it in appearance. Sometimes, according to Polotebnoff, it seems to be an abortive form of prevailing epidemics. Cases certainly should be watched carefully in connection with other symptoms, as they may be but part of the prodromata of some grave disorder. I have seen two cases in which a well-marked erythema

multiforme preceded for about ten days the outbreak of typhoid fever; the erythema then disappearing and the characteristic typhoid eruption coming in due course. Many of the subjects of erythema are debilitated. Individual predisposition probably plays an important role in the etiology of some cases, especially in the relapsing ones.

PATHOLOGY. All forms of the disease show not only hyperæmia, but also inflammatory effusion both of fluid and leucocytes. Upon the amount of this fluid depends the character of the lesion. If small in amount, it will simply push up the epidermis into a papule or tubercle; if of larger amount, we shall have vesicles and bullæ. There is also an escape of the coloring-matter of the blood into the tissues. (Crocker.)

DIAGNOSIS. If the characteristics of erythema multiforme are borne in mind, little difficulty in diagnosis will arise. These are the sudden occurrence of raised, bright or rosy-red lesions, located by preference upon the back of the hands and feet; and the color that fades away entirely under pressure, to return again when pressure is removed, and in disappearing leaves stains. It most resembles *urticaria*, but differs from it in having more stable lesions of more varied shape; in absence of wheals; in occurring particularly on the back of the hands and feet; and in burning rather than itching. The papular form differs from *papular eczema* in its chosen locations; in its burning rather than itching; in its papules being larger and never developing vesicles nor forming patches; in an absence of thickening of the skin; in disappearing completely under pressure; in tending to get well without treatment; and in leaving stains. The nodes of erythema nodosum differ from *syphilitic gummata* in occurring suddenly and not gradually. In syphilis the redness does not occur until after the node has existed for some time, and the nodes are not tender nor developed symmetrically. Moreover, there would be other evidences of syphilis.

TREATMENT. Villemin[1] maintains that iodide of potassium, in doses of at least thirty grains a day, is almost a

[1] Gaz. hebdom., May 24, 1886.

specific, and will abort relapses. The experience of Besnier and others has not been in accord with that of Villemin. Quinine, twenty to thirty grains a day, and salicylate of soda in fifteen-grain doses three or four times a day sometimes abort or check the disease. Arsenic may be tried in chronic cases. The treatment is mainly symptomatic, and directed to relieving the constipation, regulating the diet, aiding digestion, ameliorating rheumatism, or toning up the system. In obstinate cases the patient had best be [illegible]. Locally any alkaline lotion will afford relief, such as

℞ [illegible] ℈ij; 4
[illegible] ℈ss; 3
[illegible] ad ℥ij; ad 100 M.

Or

℞ [illegible] ♏xv; 3
[illegible] ℥j; 100 M.

Or, lead and opium wash, hamamelis, or other evaporating solutions. Ointments should be avoided, as they do no better than lotions and are disagreeable to use.

Sometimes a simple dusting powder will do as well. In erythema nodosum the patient should be kept in bed, and the lotion is often more agreeable to the patient when used warm. Salicylic acid or salicylate of soda internally may afford relief to the sometimes intense pains. Regulation and simplification of the diet, and the administration of diuretics or tonics, according to the nature of the case, will do good in the disease as seen in immigrants.

Prognosis. The disease tends to spontaneous cure. Relapses may occur, though they are by no means the rule. Exceptionally the disease may run a protracted course, but recovery may be expected.

Erythema Centrifuge. See Lupus erythematosus.

Erythema Elevatum Diutinum. Under this caption Crocker[1] and others describe a form of erythema that is [illegible] in girls with a rheumatic history. It de[illegible] articular prominences of the fingers, elbows,

[1] Brit. Journ. Dermat., 1891, vi., 1.

and knees, and also on the palms, toes, and buttocks. Its lesions are nodular, with a tendency to coalesce into elevated infiltrations that are most marked on the palms. They tend to persist, but may undergo involution. Their color is at first pink, but soon becomes purple. The older lesions become firm and almost cartilaginous, and are always incompressible. The lesions are always sharply defined against the skin. Histologically the disease is an inflammatory process accompanied by the production of fibrous tissue.

Erythema Gangrænosum, though described as a disease, is probably, in most instances, a feigned eruption. In it rosy, irregular patches appear on different parts of the trunk and extremities, which, at first smooth, after a few days become dry and harsh and covered with a thin scale.

Erythema Induratum Scrofulosorum is a disease first described by Bazin as erythème induré des scrofuleux. It consists in an eruption of nodular lesions that may remain deep-seated for a considerable time, so that they can be made out only by palpation. After a while the overlying skin becomes red, and later violaceous, and the lesions resemble those of erythema nodosum. In size they vary from that of a hazelnut or larger on the legs, to smaller on the fingers. They are round or ovoid in shape. They are usually few in number and discrete, but may be numerous and confluent. They are indolent in their course, and may undergo involution, or suppurate or necrose *en masse*. Polycyclic ulcers may form. There may or may not be pain or tenderness. They are located most often on the legs in young people, especially in girls of poor general health and circulation, who stand a great deal and who suffer from chilblains in winter, but may occur in others who present none of these peculiarities.

They differ from erythema nodosum in their more circumscribed form, firmer consistence, darker color, deeper seat, absence of tenderness, tendency to ulcerate, and more protracted course. Syphilitic gummata are not bilateral, and usually other symptoms of syphilis can be found.

The TREATMENT consists in rest in bed, elevation and compression of the legs, and general tonics.

Erythema Mamelonné. See Erythema roseola.

Erythema Migrans. See Erysipeloid.

Erythéme Noueux. See Erythema nodosum.

Erythéme Papuleux Desquamatif (Vidal). See Pityriasis maculata et circinata.

Erythrasma. A contagious parasitic disease of the skin, occurring especially in the groins and axillæ in the form of sharply defined, brownish-red, desquamating patches, bordered by a fringe of broken and partly detached epidermis. (Foster.)

The disease begins as a little yellowish point that soon becomes a lentil-sized macule, and grows into a patch the size of a silver dollar or the hand. Several patches join together, so that large surfaces may be involved. The patches are oval or disk-shaped, or irregular in outline. They are located in the situations where intertrigo is liable to occur, such as the axillæ, groins, and where the scrotum comes in contact with the thighs. The latter situation is declared by Besnier to be nearly always the original site of the disease. From these favorite locations the disease may spread to the chest, abdomen, or thighs. Besnier[1] met with a case involving the thigh down to the knee. The color of the patches is orange, red, yellowish, or brownish, or, in the folds of the skin, pale red. Their outline is sometimes marked by a raising of the epidermis. Their surface is dull-looking, and feels less smooth than normal and shows furfuraceous desquamation. They are quite tenacious, cannot readily be rubbed off, and show little tendency to spontaneous recovery. There may be slight itching and a very little delicate scaling.

ETIOLOGY. The disease occurs most often in men, and never in children. It is due to a parasite called the *microsporon minutissimum*, which is described by Balzer[2] as consisting of long wavy mycelia, that are rarely

[1] Journ. de Méd. et de Chirurg. prat., 1883, liv., 351.
[2] Ann. de derm. et de syph., 1884, v., 597.

branched; and of very fine spores. High powers of the microscope are necessary to see them. They are located exclusively in the corneous layer of the skin. He regards them as a common form of parasite that produces the disease in some people only on account of the peculiar fermentation of their skin secretions.

DIAGNOSIS. The disease resembles chromophytosis, eczema marginatum, and chloasma. It differs from *chromophytosis* in the darkness of its color; in the absence of distinct, rather large scales that can be lifted by the nail; in its location, sparing the trunk, except by extension; and in the character of the microscopical appearances. From *eczema marginatum* it is distinguished by an absence of all inflammatory symptoms, by not being more pronounced at the periphery than at the center, and by the microscopical appearances. From *chloasma* it differs in being a parasitic and not a pigmentary disease, and in the change it causes in the feel and texture of the skin, and in the effect of treatment.

TREATMENT. It is curable by the same means as is chromophytosis, namely, by the tincture of iodine; pyrogallol; chrysarobin; bichloride of mercury; or sulphur. It is more obstinate than is chromophytosis, and quite as prone to relapse unless thoroughly eradicated.

Erythrodermie Pityriasique en Plaques Disseminées is the name given by Brocq to a relapsing eruption of the skin well described by J. C. White.[1]

It occurs upon the face, neck, trunk, and extremities in the form of irregular, circular or oval patches. These are not elevated. They are either smooth or scaly, the scales being small and thin, and seen only on close inspection. Their color is red, which disappears on pressure. On the trunk they may have a brown tint. The diameter of the patches is from one-half to one and one-half inches. They fade out and disappear in warm weather, to relapse in cold weather.

It differs from *psoriasis* in lacking the characteristic scaling of that disease and in not being infiltrated. From

[1] Journ. Cutan. and Gen.-Urin. Dis., 1900, xviii., 536.

seborrhœal eczema it differs in the fineness of its scales and the absence of infiltration and itching.

No TREATMENT is availing.

Erythromelalgia is a nervous disease characterized by the appearance of a persistent patch of congestion, often on the sole of the foot, attended with swelling and pain. (Foster.)

Esthiomène. This is a disease of the vulvo-anal region that was described by Huguier,[1] and about which there is a good deal of uncertainty. It has been variously considered as a form of lupus, syphilis, elephantiasis, and epithelioma. "It is characterized by a leaden or violaceous hue of the parts, and their simultaneous alteration of shape, induration, thickening, ulceration, destruction, hypertrophy, and infiltration, so that the orifices and canals of the vulvo-anal region may be at the same time ulcerated, enlarged, and constricted, and its grooves and cutaneous and mucous folds exaggerated, thickened, and the seat of more or less extensive and deep ulcerations and cicatrices; without pain, without directly threatening life, and for a long time without affecting the constitution." (Foster.)

Farcy. See Equinia.

Favus. Synonyms: Porrigo lupinosa, seu favosa, seu lavalis, seu scutulata; Porrigophyta; Tinea favosa, seu vera, seu ficosa, seu lupinosa, seu maligna; Trichomykosis or Dermatomycosis favosa; (Fr.) Teigne faveuse, teigne du pauvre; (Ger.) Erbgrind; Crusted or honeycomb ringworm, Scall head, True porrigo.

A contagious vegetable parasitic disease due to the *Achorion Schoenleinii*, and characterized by the presence of discrete or confluent, circular, pale sulphur-yellow cupped crusts, or by asbestos-like masses of grayish friable crusts; by loss of hair producing irregularly shaped, disseminated, red, bald patches; by permanent atrophy of the scalp; and by running a chronic course.

SYMPTOMS. Favus affects both the scalp and the non-

[1] Mém. de l'Acad. de Méd., 1869, p. 507.

hairy skin as well as the nails and mucous membrane. We shall first describe it as it affects the scalp. A lesion of continuity, however slight, is probably necessary for contagion to take place. In a case of favus in a newborn child the period of incubation was found to be from six to

FIG. 26.

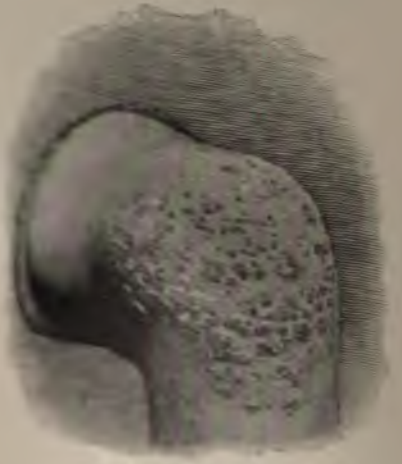
Favus capitis. (FOX.[1])

eight days. It begins either as one or more scaly erythematous spots; or as minute yellowish puncta; or as a group of vesicles smaller than those met with in ringworm. These develop into small sulphur-yellow cupped crusts about the hairs. When the case is seen by the physician the early stage is usually passed, and he will

[1] G. H. Fox: Skin Diseases of Children. New York, 1897.

find that the hair is dry and lusterless, and has fallen out in places, leaving irregularly shaped bald patches, of all sizes, and of pronounced red color. Upon both the bald patches and the parts still covered with hair the sulphur-yellow cup- or saucer-shaped crusts will be found, with raised or rounded edges, and with one or several hairs growing out of the middle of them. There will be more or less scaling, and, if the disease be of some age, thick mortar-like crusts of grayish color. In some cases when first seen it may be impossible to find the characteristic

FIG. 27.



Favus of knee.

crusts—scutula as they are called—they being obscured by the mortar-like masses. In some cases the scutula are wanting. If we approach near enough to the patient, we exhale a peculiar odor variously described as that of a mouse, or of a menagerie.

The crusts, or scutula, are situated about the hair follicles. They are from pinhead- to split-pea-size, according to their age. At first they are covered with a thin layer of epidermis, but later the edges are free. When they are

picked off they leave a moist depression which soon fills up, or a pustule, or an atrophied spot. The color is pale or sulphur yellow, or, if of long standing, it may be a dirty or greenish yellow. The crusts are discrete and disseminated or grouped; sometimes they coalesce; they are firm to the touch, and when crushed between the fingers impart a feeling of crumbling like mortar. There is a zone of slight redness about them. Though they may not be seen at the first examination, if the scalp is cleaned off and left to itself they will form in the course of two or three weeks. The baldness is rarely in well-defined patches. The patches may be few in number, or

FIG. 28.

Favus of hand, showing scutula. Side view.

so numerous that the hair occurs only in islands. At first their color is inflammatory red; later they become white and atrophic in appearance. The baldness is permanent. The hair is dry from the first; later it becomes brittle and splits longitudinally; but it is never so easily broken as in ringworm, and can easily be pulled out with its roots. There is itching of the scalp. That is the only subjective symptom. Pustulation does not belong to the disease, but may be an accidental complication. Other complications that may arise are pediculosis, eczema, and enlargement of the cervical glands.

Occurring upon non-hairy parts favus undergoes materially the same development and forms the characteristic cups. Sometimes it will take the circular form of a ringworm with the development of vesicles, and resemble it very closely, only that the cups will be sure to develop somewhere. (Figs. 27, 28, and 29.) The scutula develop around the lanugo hairs. There may be only one patch of favus or a large part of the body will be covered by the fungous growth in the form of sulphur-yellow cupped

FIG. 29.

Favus of hand. Front view.

crusts and asbestos-like masses. On the non-hairy parts the disease is easier of cure than on the scalp, and is not so apt to leave scars. In a single case, that of Kaposi, the favic fungus was found implanted upon the mucous membrane of the stomach. The nails may be affected, either in the form of onychitis beginning at the side of the nail, hardly distinguishable from the same disease developed from common causes; or in having a scutulum develop in the nail-bed and show through the nail.

This is rare. The occurrence of favus upon the head will give a clue to the origin of the onychitis.

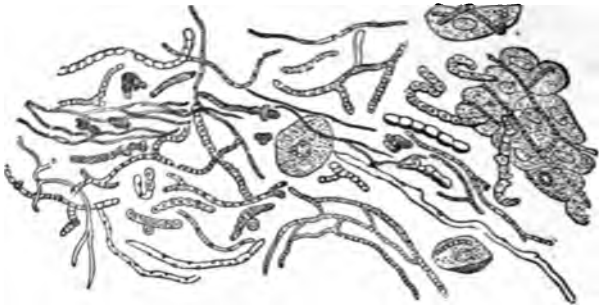
ETIOLOGY. The disease is due to the implantation and growth of the *Achorion Schoenleinii* primarily in the scalp and secondarily in the hair. It is contagious, but not so much so as is ringworm. It used to be rare in New York City, but on account of its being constantly imported from Europe the disease is on the increase, and cases are beginning to occur in native Americans. Its course is very chronic, and it shows less tendency than ringworm does to spontaneous recovery about the time of puberty. Though children are more commonly affected than are adults, it is by no means uncommon to see it in full activity in people well advanced in life. It has been asserted that the strumous diathesis predisposes to favus, but this is doubtful. Like all other parasites, it requires a certain soil upon which to grow, and does not affect all skins. It is a common disease in mice, and may occur in rabbits, dogs, cats, and fowls, and thus be a source of contagion for the human race.

PATHOLOGY. The cups are composed almost wholly of the fungus, which consists of flat, narrow, branching and inosculating mycelial threads $\frac{1}{800}$th of an inch in diameter, and of pale-gray color; and of small spores of round, oval, flask, or dumb-bell shape, and of a pale-greenish color. (Figs. 30, 31.) The spores gain access to the skin by the orifices of the hair follicles, and, after remaining there undisturbed, begin to grow in the upper part of the hair sac, and between the superficial layers of the epidermis, and subsequently invade the hair, growing in its cortical substance. The cup may be formed either by the sinking in of the more central portion of the mass, or on account of the central portion being attached to the hair so firmly that it cannot so readily give way and bow out under the pressure of the growing fungus as do the parts farther away from the hair. The atrophy of the skin is largely due to the pressure of the growing fungus, which is powerful enough to destroy the cranial bones of mice; and in part to the inflammation of the skin produced by the presence of the fungus.

The question of the unity or non-unity of the fungus of favus is still unsettled. Several fungi—Quincke says three, and Unna asserts that there are nine—seem capable of producing the clinical picture of the disease. Other competent bacteriologists hold that the apparently diverse fungi are either different stages of development of the same fungus or due to different culture-media. All varieties of the achorion produce the same clinical picture. It is distinct from the trichophyton fungus.

DIAGNOSIS. Most cases of favus are easy of diagnosis: the sulphur-yellow cupped crusts; the asbestos-like grayish masses; the red, atrophic bald spots, with tufts of dry

FIG. 30.



Achorion Schoenleinii. (After KAPOSI.)

and more or less kinky hair in them; and the peculiar odor, being so well marked. *Ringworm* has none of these features. Moreover, it occurs in the form of circular, circumscribed, only partially bald patches covered with grayish scales in moderate amount; has characteristic nibbled-off "stumps" of hair; and under the microscope we find the spores less abundant, smaller, and more uniformly round than in favus. It must be confessed, however, that without the clinical features of one or the other disease, none but a most expert microscopist could make the diagnosis in a doubtful case by the microscope alone. In *eczema* baldness is very rare, and we will usually find a characteristic patch of the disease behind the ear; its

crusts are greenish and tenacious, not gray and friable; the hair is matted by the sticky exudation; and if discrete impetigo lesions are present, they will contain pus, and not be solid like the favus crust. Leaving the scalp alone for a time will decide the matter, as scutula will be

FIG. 31.

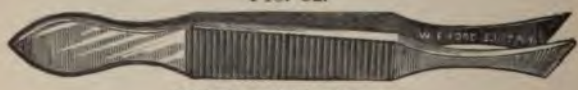
Achorion Schoenleinii in hair shaft and follicle. (After KAPOSI.)

sure to form if the disease is favus. *Seborrhœa* causes a general thinning of the hair, the scalp is not atrophic, there are no scutula, and no achorion in the hair and scalp. *Lupus erythematosus* resembles favus only in producing atrophic red spots. There will usually be patches of the

disease elsewhere, and its whole course is different. *Psoriasis* does not cause atrophic bald spots, and rarely occurs on the scalp alone. *Alopecia areata* presents more or less circular bald areas, but these are white, smooth, and of normal texture, and there is no fungous growth in the hair. *Alopecia* from syphilis in its secondary stage resembles favus more closely than any other disease of the scalp; but it occurs primarily at a later age than does favus, it comes on more suddenly, there is no history of crusts, nor cicatricial alteration of the scalp, and there will be other evidences of syphilis on the body, and (especially in women) the broken arch of the eyebrows.

TREATMENT. In the treatment of the disease we need three weapons—patience, perseverance, and parasiticides. Before using the last we should always epilate, pulling the hair out systematically from day to day, so that eventually all the hair of the scalp is plucked. To do this we may

FIG. 32.



Piffard's epilating forceps.

use the epilating forceps (Fig. 32); or Kaposi's method of grasping the hair between the thumb and a spatula or piece of stiff cardboard held firmly in the hand; or, in dispensary practice, we may employ epilating sticks, made, according to Bulkley, of

℞	Ceræ flavæ,	℥ij;	8	
	Laccæ in tabulis,	℥iv;	16	
	Picis burgundicæ,	℥x;	40	
	Gummi damar.,	℥jss;	48	M.

These ingredients are to be melted together, and then moulded into sticks a half-inch or more in diameter. They are to be used by melting the end, and when warm applying it to the hair with a sort of boring motion. When cold they are to be suddenly twisted off, when, of course, they will bring many hairs with them. The "calotte," or pitch-cap, used to be employed for this pur-

pose, but was given up because it caused the death of several patients. Kaposi's method is the best of all. If the head is greatly crusted, the crusts may be scraped off with a curette or cleaned off by means of soaking the scalp with oil for a day or two, and then washing with soap and water. For an oil we can use sweet oil, sweet almond oil, or cotton-seed oil, with three per cent. of carbolic or salicylic acid. The use of these oils should be continued throughout the whole course of the disease to prevent the spread of the fungus upon the scalp of the patient and to the scalp of other people. After the first washing we should allow the scalp to go unwashed for twenty-four hours, so as to permit the full action of the parasiticide.

After the cleansing and the epilation the parasiticide must be rubbed and worked into the scalp. Of these, there are many from which to choose. Sulphur ointment is one of the best, if properly and persistently used. Other ointments are thymol, naphtol, resorcin, and pyrogallol in five to ten per cent. strengths, and those of the ammoniate or yellow sulphate of mercury. Or solutions may be employed, as bichloride of mercury, two grains to the ounce of ether or alcohol; the oleate of mercury or copper, ten to twenty per cent.; tar; oil of cade; creosote in ether or alcohol; sulphurous acid in full strength; salicylic acid, five per cent. in oil; or tincture of iodine, or an ointment composed of a drachm of the crystals of iodine in an ounce of goose grease. Iodine, according to Sabouraud, should be used only once a month; in the meantime the scalp should be washed alternately with alcohol and camphorated alcohol, or with a solution of salol, one and a half per cent. and kept constantly anointed with iodine ointment. After a month the epilation and the iodine are to be repeated. Hydronaphtol plaster does good service in favus, used according to the method described under Trichophytosis, which see. Peroni[1] recommends spraying the head with acetic acid used in an atomizer, after covering any excoriated points with diachylon ointment on a piece of cloth. At first the scalp feels cold. Hyperæmia follows, which lasts about forty-eight hours and disappears,

[1] Ann. de derm. et de syph., 1891, ii., 797.

leaving slight desquamation. When the hyperæmia lessens the acid is to be again used. When there are no excoriations the head is to be washed every morning and evening with water and corrosive sublimate soap. Busquet[1] recommends sopping on daily a solution of

℞	Essentiæ cinnamomi,	ʒijss;	10	
	Spts. æther. sulph.,	ad ʒj;	ad 30	M.

Besnier and Doyon[2] recommend as a preparatory treatment for favus that the hair be cut off from and around all the patches, and the whole head then covered for two or three hours with equal parts of soft-soap and lard. This is to be washed off with warm water, and the head is to be kept covered during the night with a cap of rubber or other impermeable cloth. The next morning the head is to be washed perfectly clean, bathed with a solution of boric acid (25 : 1000), and covered with borated lint soaked in the following solution:

℞	Sodii salicylati,	ʒiij;	25	
	Sodii bicarbonati,	ʒijss;	10	
	Aquæ,	ad Oij;	ad 1000	M.

Over all comes the impermeable cap. After a few days the dermatitis will disappear and the scalp will be clean, and then epilation must be practised, the hairs being pulled not only from the patches, but for about a half-inch about them. Epilation is to be repeated every week until no longer any trace of redness about the hairs exists, and the head is to be kept covered with the impermeable cap. Every evening the whole head is to be rubbed with an antiparasitic ointment, such as:

℞	Bals. Peruv. *vel* Ol. cadini,		2 to 5 parts.	
	Ac. salicyl., Resorcin.,	āā	1 to 5 "	
	Sulph. præcip.,		5 to 15 "	
	Lanolini, Vaselini, Adipis,	āā p. æ.	ad 100 "	M.

[1] Ann. de derm. et de syph., 1892, ii., 269.
[2] Kaposi: Mal. de la Peau. French ed., Paris, 1891.

Every morning the whole scalp is washed with tar soap, and each favic patch is soaked with the following:

℞ Alcoholis (90 per cent.),	100 parts.	
Ac. acetic. (crystals),	½ to 1 part.	
Ac. boric.,	2 parts.	
Chloroformi,	5 parts.	M.

Then each patch is to be accurately covered with mercurial plaster.

Favus of the non-hairy parts of the body usually yields readily to the removal of the crust and the use of a parasiticide.

Favus of the nail may be treated by the constant application of a mercurial, resorcin, or hydronaphtol plaster. If the disease is limited to one or two points, they may be cut down upon and the remedy applied directly. Sometimes it may be necessary to remove the whole nail.

After a case of favus has been faithfully treated for a number of weeks and looks as if it were well, it should be let alone and watched carefully for a long time. Any red point that appears is evidence that the disease is cropping up again, and should be immediately attacked.

PROGNOSIS. The prognosis is good, provided the case is faithfully and energetically treated. Relapses will surely occur if any of the fungus remains in the scalp. A cure takes months or years to effect. The scars from favus are permanent. Favus of the nail is specially rebellious to treatment, and may cause permanent destruction of the nail.

Feigned Eruptions. It is a good rule to consider the possibility of malingering whenever we meet with an eruption that does not correspond to any type eruption, and at the same time is not due to the action of drugs ingested or locally applied, nor to irritants that have come accidentally in contact with the skin. Eruptions are feigned mainly by three classes of individuals, namely, soldiers, sailors, or convicts for the purpose of shirking work; paupers for the purpose of gaining admission to hospitals; and hysterical young women for the purpose of exciting sympathy.

Not only are feigned eruptions peculiar in appearance, but also it will be observed that they are usually on the left side of the body, as they are commonly due to acids applied by the right hand; or on the legs. The back is seldom the seat of these lesions. Most commonly they are irritative lesions, such as would be due to tartar emetic ointment, croton oil, nitric acid, carbolic acid, mustard, and the like. If made by acids, the lesions will often have lines radiating from the main mass showing where the acid has run further than intended. Some of the lesions imitate genuine disease with amazing faithfulness.

It is impossible here to give a full account of the feigned eruptions. A good list is given by Van Harlingen,[1] and to this I would refer the reader. Sycosis by tartar emetic ointment and tar; favus by means of acids; alopecia areata by means of plucking the hair; ringworm by means of depilatories; scabies by means of excoriating with a fine needle; various forms of ulcers and pustular eruptions by means of acids and caustics; gangrene in the same way; all these and others have been simulated. In case of a suspected feigned eruption the part should be covered with an impermeable dressing, when, of course, the lesions will soon be well.

Feuergürtel. See Zoster.

Feuermal. See Nævus.

Fever Sore. See Herpes facialis.

Fibroma. Synonyms: Fibroma molluscum; Molluscum fibrosum; Molluscum simplex; Molluscum pendulum.

Fibromata are soft tumors of the skin that are composed of a hyperplasia of the connective tissue as well as the subcutaneous tissue, and occur in various shapes, colors, and sizes. The most commonly encountered form of fibroma is

Molluscum fibrosum. These may be of the color of the skin, or pinkish or even brownish or brownish red; most commonly they are of normal color. They may be

[1] Pusey's System of Gen.-Urin. Dis., Syph., and Dermat., vol. iii. 1894.

rounded, flattened, sessile, or pedunculated, but always raised above the level of the skin. They may hang down like polypi. The skin over them feels soft and of normal texture, or it may be thickened or atrophied. Hairs sometimes grow from them. There may be but one or

FIG. 33.

Multiple fibromata.[1]

two present, or there may be hundreds of them so that the body is strewn over from head to foot with the variously shaped tumors. The trunk is the most common location for fibromata, but they may occur on all parts

[1] From a photograph of a case of Dr. E. T. Tappey, of Detroit.

and involve even the mucous membranes. (Fig. 33.) They give rise to no inconvenience except on account of their size, which sometimes may be that of a child's head or larger. Their usual size is from that of a cherry to that of a walnut. Many of them show a slow growth, while many are stationary, and some may involute. Comedones of large size may accidentally form in some fibromata. The larger ones may ulcerate. All of them feel soft, while the larger ones may be elastic to the touch. When they hang down in the form of large skin-folds which have undergone hypertrophy, the term *fibroma pendulum* is applied to them. Dermatolysis (which see) has been considered as a form of fibroma. According to some authorities, fibrous moles and soft warts are but forms of fibroma.

Etiology. Fibromata usually appear in childhood, though they may not do so until later in life. They are sometimes hereditary, and are often seen in several members of the same family. They tend to increase with advancing age—that is, they are not so large or numerous in children as in adults. Children with multiple fibromata are often stunted both physically and mentally. By some authorities they are regarded as related to neuro-fibromata.

Diagnosis. Molluscum fibrosum differs from *molluscum contagiosum* by not having a central depression, and by being of the normal color of the skin. They are also usually far more numerous. From *fatty tumors* they differ in not being lobulated, and in being pedunculated and less flat. *Sebaceous cysts* are not so numerous, and their contents can be squeezed out to a large extent, while fibromata are solid.

There is another form of fibroma to which the name *Acrochordon* is applied. They occur as small, soft, pedunculated, vascular, and mole-like lesions upon the face, shoulders, and elsewhere in elderly people whose skin is degenerated. They often take the form of little hernia-like sacs of skin when their contents have been absorbed.

There is also a hard variety of fibromata called *desmoids*. These occur as round or oval, compact, smooth nodules, from hemp-seed to pea size.

TREATMENT. They may be snipped off with scissors or tied off with ligature if pedunculated. If non-pedunculated, they may be destroyed by electrolysis or excised. If of large size, they must be excised. The galvano-cautery may be used to destroy any form.

Fibroma Fungoïdes. See Mycosis fungoïdes.

Fibroma Lipomatodes. See Xanthoma.

Fibromyoma. See Myoma.

Figwart. See Verruca.

Finnen. See Acne.

Fischschuppenausschlag. See Ichthyosis.

Fish-skin Disease. See Ichthyosis.

Flachenkatarrh der Haut. See Eczema.

Flachenkrebs. See Epithelioma.

Fleckenmal. See Nævus pigmentosus.

Flechten. May mean Herpes, or (nässende) Eczema, or (fressende) Lupus.

Flea-bites occur in the form of small red puncta which may or may not be in the center of wheals. They sometimes bear a close resemblance to urticaria that has been scratched. The grouped arrangement of the lesions and the limited areas upon which they occur suggest their origin.

Flesh-worms. See Comedo.

Fluxus Sebaceus. See Seborrhœa.

Folliculitis means an inflammation of the hair follicles. When the hairs involved are those of the beard we have *F. barbæ*, or sycosis, which see. The hair follicles on the extremities, especially of the legs, may become inflamed on account of some irritant applied to the skin. One form of this is tar acne. In workers in oil or paraffine it is no uncommon thing to see each hair on the legs, especially the thighs, standing in the center of a red papule or pustule. The cure consists in removing the cause, in

cleansing the parts, and the application of an alkaline soothing lotion.

Folliculitis Decalvans. Under the name of *folliculites et périfolliculites décalvantes agminées* Brocq has described a form of inflammation of the hair follicle closely allied to sycosis. Besnier has given the same disease the name of *alopécies cicatricielles innominées*. It is characterized

FIG. 34.

Folliculitis decalvans.

by an inflammatory process, which results in complete destruction of the hair papillæ, and the formation of cicatricial tissue; and by a tendency for its lesions to aggregate themselves in groups. Besnier[1] reported a case of this in 1889. He says that it is the same thing that has been called acné lupoide and folliculite épilante. In the case reported the disease affected all the posterior part of the

[1] Ann. de derm. et de syph., 1889, x., 104.

scalp, which was sown over with disseminated patches of baldness of unequal size, irregular shape, and serpiginous. They were depressed in the center, which was smooth, polished, thinned, cicatricial, and completely bald. Their borders were not well defined, but merged into the islands of healthy hair. The scalp between the borders and the center of the patches was bald, of variegated redness, with some hairs broken off at the surface of the scalp. In the funnel-shaped openings of the hair follicles there were little superficial collections of pus. Some of the patches were

FIG. 35.

Folliculitis decalvans.

torn by scratching, and others looked precisely like those of alopecia areata, without signs of inflammation. All treatment seemed to be in vain, and the scalp bore only the mildest applications.

Another variety of folliculitis decalvans is that described by Quinquaud. It affects most often the scalp hair, more rarely that of the beard, pubes, and axillary region. It produces irregularly shaped areas of baldness, which are quite smooth, polished, pale, atrophic-looking, and presenting at some points slight redness. The areas are

disseminated, about the shape of a franc-piece, separated by islands of healthy hair. The bald spots are slightly depressed. At the peripheries of the patches or in the islands of healthy hair between them will be found pin-head, discrete pustules about the hairs. The latter are easily plucked or fall spontaneously. Or there are simply punctiform, isolated red spots which may or may not be scaly; or a red, elevated, inflamed follicle. The fall of neighboring hairs produces the bald patches. The disease is very chronic and marked by a series of outbreaks. A micrococcus has been found in probable causative connection with the disease.

Still another form affects the bearded portion of the face, and from there invades the temporal region of the scalp. This is the *ulerythema sycosiforme* of Unna, and the so-called chronic sycosis. It begins like a sycosis, but when the inflammation subsides it is seen that the skin is cicatricial and the hair destroyed. There may be one or more patches. The patches may be symmetrical or non-symmetrical, and they tend to spread slowly by peripheral extension.

TREATMENT. The treatment found to be most efficacious is to clean the scalp with soap and water; to paint the diseased patches and their vicinage with the tincture of iodine; and to bathe the same every morning with the following:

℞	Hydrarg. biniod.,	gr. j;		15	
	Hydrarg. bichlor.,	gr. iv;		1	
	Alcohol.,	℥ss;		60	
	Aquæ destil.,	ad ℥iv;	ad	500	M.

This may check the disease, but the baldness is irremediable. (Brocq.)

Folliculitis Rubra. See Keratosis pilaris.

Fordyce's Disease of the Lips. In 1896 J. A. Fordyce[1] first call[ed] attention to this disease, which is probably not very [rare], several other cases have been reported since [then]. It consists in the mucous membranes of the lips in the

[1] Cutan. and Gen. Urin. Dis., 1896, xiv., 413.

form of patches made up of small, irregular, closely aggregated milium-like bodies of light-yellow color, located just beneath the mucous membrane. These same bodies are also scattered disseminately about the patches. Burning and itching, and a feeling of tension as if the lip were swollen, are complained of. Similar lesions occur on the inside of the cheeks along the line of the closed teeth. These are somewhat lighter in color, more elevated and papillomatous. The milium-like bodies can be removed readily. They may be found in several members of the same family, and increase with age. They are atrophic sebaceous glands in the mucous membrane.

Fragilitas Crinium. See Atrophia pilorum propria.

Frambœsia. See Yaws and Dermatitis papillaris capillitii.

Freckles. See Lentigo.

Frieselausschlag. See Miliaria.

Frostbite. See Dermatitis calorica.

Fungous Foot of India. Synonyms: Madura foot; Mycetoma; Podelcoma; Ulcus grave; Tubercular disease of the foot.

This is a disease that is endemic in certain parts of India, but has been met with in this country. Though usually affecting the foot and leg, it is seen occasionally on the hands, shoulders, and scrotum. According to Crocker, there are two varieties, the pale and the black, the latter being the more common. It may begin with slight congestion of the affected part; or as a local induration, either superficial or deeply seated, of some part of the foot, which is firmer, larger, more diffused, and less painful than a boil. When this is opened, it discharges pus at first, later granules like poppy seeds, or mulberry-like masses are mingled with the discharge. Or it may begin as a blackish or bluish mottled discoloration like tattoo puncta. The progress of the disease is slow, but in the course of a few years the foot becomes swollen and distorted, the arch being broken, the toes being over-extended, and the sole convex from behind forward. It becomes dotted over

with the raised orifices of sinuses extending deep down into the tissues, and giving vent to the above-described discharge.

It is more common in males than in females, and rare before puberty. Its origin is obscure, though it is supposed to be due to a fungus. Surgical interference is the only hope for a cure.

Furunculi Atonici. See Erythyma.

Furunculus. Synonyms: (Fr.) Furoncle, Clou; (Ger.) Blutschwär; Furuncle or Boil.

An acute circumscribed phlegmonous inflammation around a skin gland or hair follicle, characterized by one or more round, more or less acuminated, firm, painful formations, and usually terminating by necrosis and suppuration. (Foster.)

Symptoms. This is a common and familiar disease of the skin. Its most frequent locations are the back of the neck, face, forearms, buttocks, and legs, though it may occur anywhere. It begins as a small, round, red, painful spot, which in two or three days enlarges to attain the size of a split pea or silver quarter- or half-dollar. It is now raised above the surface, hard, of a dark-red color at the center with the redness fading away into the sound skin, more or less pyramidal in shape, exquisitely tender to the touch, and with a most agonizing throbbing pain. Its center soon becomes yellow, indicating the point at which suppuration has taken place, and where it will open. From the opening comes the "core," a greenish-gray or whitish pultaceous mass mixed with pus and blood. With the escape of this all the symptoms subside and the cavity fills up by granulation, leaving more or less of a scar. The course of the individual boil is from seven to ten or fifteen days. At times suppuration does not take place, but the mass undergoes resolution. This is the so-called "blind boil."

There may be but one boil or there may be hundreds of them. They come out in crops of from two to half a dozen at a time. If very numerous, or of large size, they give rise to constitutional disturbance. They may

continue to form for weeks, months, or even years, if left untreated. This is what is called *furunculosis.*

Boils are always isolated. They may be confined to one locality or come out in a number of regions at the same time. There may be sympathetic enlargement of the neighboring lymphatic glands. If the disease is extensive, the patient presents a truly pitiable condition.

If a boil starts from a sweat gland, it resembles that which originates in a sebaceous gland, except, according to Crocker, it has no mattery head and is somewhat less indurated. This form of boil is called *hydradenitis* by Verneuil and Bazin. It is of the size of a pea, and is most often met with in the axillæ, about the anus and perineum, near the nipples, and may form anywhere where there are sweat glands, excepting on the soles of the feet.

Boils may occur in the external auditory canal in conjunction with the disease elsewhere. They are exceedingly painful and produce deafness. One or both ears may be affected, but usually it is only one ear. They may set up inflammation of the entire canal and tympanum; one case of this sort has ended fatally. If the furuncle is situated in the posterior wall of the canal, or a general inflammation has been set up, considerable redness and tumefaction over the mastoid region may occur. (Dr. A. Rupp.[1])

Etiology. The cause of furuncles is the entrance into the skin of the staphylococcus pyogenes aureus et albus. Local infection produces crops of boils occurring in one region, and the doctrine of local infection finds further support in the results of treatment by antiseptics. It must be remembered that these micrococci are widely distributed, having been found in dishwater, in the superficial layers of decayed vegetable matter, in the swaddling-clothes of healthy infants, in the dirt under the finger-nails, and in numerous other places. Like other parasites, these require some peculiarity of soil for their growth, or at least an opportunity for gaining entrance to the glandular apparatus of the skin. The soil is afforded in lowered vitality of the skin, and thus we find boils in diabetes mellitus, after specific fevers, in anæmia, lithæmia, uræmia,

[1] Personally communicated.

[redacted]

divided doses, or one of Fleischmann's yeast cakes being eaten during the day. Le Gendre,[1] believing that boils may arise from the absorption of products of imperfect digestion, advises the disinfection of the intestinal tract by the use of the following powder:

℞ β-Naphtol,
Bismuth. salicylat.,
Magnesia carb., } āā gr. ivss; | 30
M.

which is to be given every four hours.

The local treatment of boils is important and efficient. They should not be poulticed, as, being due to a fungus, the heat and moisture only facilitate the growth of the same and the production of new boils. That new boils are apt to spring up about a poulticed boil is a common experience. "Hands off" is the rule for young boils, nor should old ones be squeezed. We should endeavor to abort the development of a boil. To do this there are various approved methods, but the one most highly commended is the use of carbolic acid. This may be either by touching them with pure carbolic acid; injecting them with a few drops of a two per cent. solution; or spraying them with the same solution for fifteen minutes at a time eight times during the day, and keeping them covered with carbolized dressings in the meantime. Mercury may be used instead of carbolic acid, the boils being kept covered with emplastrum hydrarg. with a little hole cut in the plaster to correspond to the center of each boil; or an ointment of the nitrate or red oxide may be used. Painting with iodine is also commended; as well as keeping them covered with a saturated solution of boric acid, or an eight or ten per cent. plaster or ointment of salicylic acid. Hardaway speaks highly of Unna's carbolic acid and mercury mull plaster. Electrolysis to destroy the follicle is spoken of by the same authority.

When aborting is out of the question, it is a good plan to thrust a little pure carbolic acid, on the sharpened end of a wooden toothpick, or the like, into the central opening. It hurts for a few minutes only, and is promptly curative.

[1] Union méd., 1888, xlv., 98.

The boil should then be dressed with carbolized vaseline or a boric acid ointment, or a five per cent. salicylic acid or oil should be smeared over the boil and the contiguous parts. Or it may be opened and dressed with iodoform, or aristol, as the odor of the former is objectionable. Here too the mull plaster of carbolic acid and mercury may be used. Instead of the pure carbolic acid, Crocker advises the glycerole of carbolic acid of the British Pharmacopœia.

Furuncles of the ear. My friend, Dr. A. Rupp, late aural surgeon to the New York Eye and Ear Infirmary, has kindly advised me on this head as follows: In the treatment of furuncles of the external auditory canal the first requisite is that the physician *sees* that which he is to treat. If the auditory canal be filled or unclean, it must be syringed out with a two to five per cent. solution of carbolic acid, followed by a solution of bicarbonate of soda as hot as can be comfortably borne.

The canal is to be dried with absorbent cotton, and if the membrana tympani is intact filled with:

℞ Hydrarg. bichlor. gr. v;
Glycerini, } āā ℥j; āā 30
Alcoholis, } M.

which is to remain in some minutes, and then the excess is allowed to drain off. The canal is lightly closed with borated or salicylated absorbent cotton. Protargol, five grains to the ounce of water, applied on pledgets of absorbent cotton and left in for an hour or two, gives good results. If the membrana tympani is deficient, the whole canal is to be filled with powdered boric acid and the orifice closed as before. In either case the cotton is to be changed when soiled. When furuncles are at the inner end of the canal near the membrana tympani, a leech or two in front and a little above the tragus will afford much relief. It is unnecessary to incise the furuncles except where pus has formed and has no outlet.

Prognosis. In most cases boils are annoying, but not dangerous. Those about the face give the most trouble. How long new boils will continue to form it is impossible

to say. If the treatment by carbolic acid is used, the disease is usually soon over. In furunculosis all will depend upon how soon we can get the patient into a better physical condition.

Furunculus Orientalis. See Aleppo boil.

Gale. See Scabies.

Gangrene of the Skin. See Dermatitis gangrænosa.

Gansehaut. See Cutis anserina.

Gefässmal. See Nævus vasculosus.

German Measles. See Rubeola.

Geromorphisme Cutané is the name chosen by Drs. Souques and Charcot[1] to designate an affection that produced changes in the skin of a girl eleven years of age so that she looked like an old woman. The expression of the face suggested that due to facial paralysis. The skin hung in loose folds, and was flabby like the skin sometimes seen in very old people. Apart from loss of natural consistence and elasticity there was no change in the skin. If lifted up, twisted, or folded in any way, it returned very slowly to its normal position; and it was abnormally movable over the subcutaneous tissues, in these things suggesting that form of dermatolysis called "elastic skin." There were no changes in the hair, nails, or teeth. There was no assignable cause for the condition, which was preserved unaltered during an interval of ten years from the first to the last time that the doctors saw the case.

Geschwüre. See Ulcers.

Gesichtsatrophie. See Atrophoderma idiopathica.

Glanders. See Equinia.

Glanzhaut. See Atrophoderma idiopathica.

Glossy Skin. See Atrophoderma idiopathica.

Gneis. See Seborrhœa sicca.

Gommes Scrofuleuses. See Scrofuloderma.

[1] Nouvelle Iconographie de la Saltpêtrière.

Goose-flesh. See Cutis anserina.

Granulationsgeschwulst. Granulation-tissue new growths.

Granuloma. The name given to a tumor consisting of granulation tissue. It is found in various parts of the mucous membrane. It is seen about wounds which do not heal by granulation. It is probable that some irritant is necessary to cause the growth of these inflammatory granulomata. It sometimes takes the form of a pedunculated tumor. The application of nitrate of silver, caustic potash, or some other escharotic power to it will cause it to shrivel and slough away.

Granuloma Fungoides. See Mycosis fungoides.

Granuloma Necrosum. This is an affection whose true pathology is not yet known. It has been described under various names, and is considered by some syphilitic, by others tuberculous, and sometimes as a combination of the two. In an advanced stage of the disease it resembles in the appearance of the tissues. They grow rapidly, and when they reach the size of a pea or a nut-shell, and finally become necrotic. They are usually supplied with an abundant blood-supply, and may be readily removed by the knife. Suppuration, ulceration, and sloughing are not characteristics.

The disease occurs in both sexes, but is more frequent in males. It is not tuberculosis. It is not syphilis. It is not tuberculosis. It is not syphilis. It is not syphiloderm or gumma, but may be distinguished by its course. Upon the fingers and toes it looks like chilblains, but its necrotizing character distinguishes it.

Grayness. See Canities.

Greisenhaftigkeit der Kinder. See Sclerema neonato-

Grocer's Itch is eczema of the hand.

Grubs. See Comedo.

Grutum. See Milium.

Grutzgeschwulst. See Atheroma.

Guinea-worm Disease, or **Dracontiasis,** is met with endemically in tropical climates. It is caused by the larvæ of the guinea-worm, or filaria medinensis, being swallowed, and developing in the body, It is possible that the worm may gain access through a traumatism. The female makes its way into the muscles, and within nine or twelve months gives rise to the symptoms of the disease. The male probably dies and is passed out of the body. The symptoms of the disease are a small tumor under the skin that feels like a coil of soft string; the appearance of a pea- to filbert-sized vesicle upon this when the animal is about to escape; tension, pain, and itching; in severe cases inflammation, purulent discharge, hectic fever, and perhaps delirium. The worm is either gradually wholly extruded after the vesicle breaks, or a new tumor forms after a part has escaped, and this after a time breaks and the rest of the worm comes away. There may be only one worm or a legion of them. They are located most often in the foot, but may be found anywhere.

TREATMENT. The treatment of the disease is to remove the worm, which is done by winding it carefully around a stick when the head is protruded, giving a turn or two every day until the worm is extracted. Manson advises against this, and speaks well of injecting into the tumors a 1 : 1000 solution of bichloride of mercury. This kills the worm, and it can then be removed. Tincture of asafœtida in doses of one or two drachms three times a day kills the worm before extraction.

Gumma. See Syphilis.

Gune. See Tinea imbricata.

Gurtelkrankheit. See Zoster.

Gutta Rosea. See Rosacea.

Haarmenschen. See Hypertrichosis.

Hæmatidrosis, or **Hæmidrosis**, is a rare disease of the sweat glands in which, on account of an effusion of blood into the coils and their ducts by diapedesis from the surrounding vascular plexus, blood is discharged upon the skin along with the sweat. The subjects are apt to be hysterical young women, though the affection has been seen in newborn children. It is in some cases vicarious menstruation. The points of election are the face, ear, umbilicus, hands, and feet. Ephidrosis cruenta and bleeding stigmata are other names for the curious malady. The treatment should be directed to the condition of the individual.

Hæmorrhœa Petechialis. See Purpura.

Hair, Discolorations of. Hair sometimes falls out to grow in of a different color. The continuous hypodermic administration of pilocarpine has been followed by a change of color of the hair from light to dark. Green hair occurs in workers in copper; blue hair occurs in workers in cobalt and indigo. These colors can be removed by washing. Yellow hair is occasionally seen in icterus. Various chemicals bleach the hair, such as peroxide of hydrogen. Chrysarobin stains it purple; resorcin may stain it green. Bicarbonate of soda changes dark hair to a dirty brown.

Harlequin Fœtus. See Ichthyosis congenita.

Hautfinne. See Acne.

Hauthorn. See Cornu cutaneum.

Hautgries. See Milium.

Hautkrebs. See Epithelioma.

Hautsclerem. See Scleroderma.

Hautwürmer. See Comedo.

Hæmorrhage, Cutaneous. See Purpura.

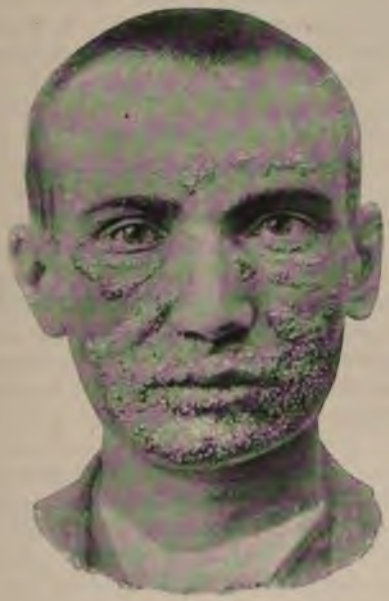
Hæmatrophia Facialis. See Atrophoderma idiopathica.

Henoch's Disease. See Purpura fulminans.

Herpes. An acute inflammatory disease of the skin characterized by an eruption of one or more groups of vesicles upon reddened bases.

There are two main varieties of the disease: one occurring upon the face, *herpes facialis*, and one occurring upon the genitals, *herpes progenitalis*.

FIG. 36.



Herpes febrilis.

SYMPTOMS. *Herpes facialis*, also called herpes febrilis, herpes labialis, hydroa febrilis, fever blister, or cold sore, usually occurs upon the lower part of the face, about the mouth (Fig. 36). There is commonly some slight disturbance of the general economy, not as part of the disease, but as the cause of it. The patient first notices more or less marked burning, stinging, or itching in the part, and perhaps at the same time erythematous papules

may form. After a few hours a number of pinhead- to pea-sized, clear, fully distended vesicles will appear upon an erythematous base. Perhaps the herpetic patch may appear suddenly without antecedent erythema. There is usually not more than one or two patches of small size. There may be a score or more of them, and they may be of large size. The patches are always irregular in shape. There may be but two or three vesicles in a group, or there may be a dozen of them. They do not tend to break down of themselves, but after a few days dry up into a crust which falls and leaves a red spot that soon disappears. Sometimes the vesicles may coalesce into bullæ, the covers of which may fall and a superficial ulceration be left. The duration of the disease is about eight or ten days. The most common location is upon the upper lip, but it may be anywhere upon the face, and not uncommonly the groups develop bilaterally. The mucous membrane of the mouth may also be involved, but here, owing to the heat and moisture, the vesicles are seldom seen, as they break down and leave excoriated points. There is a strong tendency for the disease to recur with the recurrence of the exciting cause. In some cases it recurs at irregular intervals for months and without apparent cause.

Etiology. It is still an undetermined question whether herpes facialis is a zoster or not. By most authorities it is considered to be an independent disease; by a few it is thought to be an incomplete zoster. It is known to occur with catarrhal inflammations of mucous membranes, such as a coryza or bronchitis; with digestive derangement, as gastritis or enteritis; with various febrile diseases; and it is very often seen in women as a herald of the menstrual epoch, occurring with great regularity for years. It arises sometimes on account of an injury to the terminal ends of the nerves, and, as such injuries are liable to occur in the tender mucous membrane of the lips, this may be an explanation of its frequency about the mouth. Infection has been invoked by a few observers as a cause, but this is not proven. It is evidently a neurosis, and in some cases no cause for it can be found excepting nerve disturbance.

Sometimes it occurs coincidently with herpes progenitalis or with zoster.

DIAGNOSIS. It must be diagnosticated from zoster and from vesicular eczema. From *zoster* it differs in not occurring in a series of groups scattered along the course of distribution of the trigeminus; and in frequently being bilateral. Generally speaking, there is more marked neuralgia in zoster, though in some cases this is wanting. From *eczema* it differs in the large size of its vesicles, in their showing no tendency to break down, in being less pruriginous, in running a regular course, and in rapidly recovering by the simple drying up of the vesicles.

TREATMENT. Left to itself the disease will speedily get well, and really requires no treatment beyond protection with flexible collodion or any indifferent soothing lotion or ointment. We are often asked if we cannot prevent or abort the disease when due to the menstrual flux. Women know well that the application of spirits of camphor will sometimes do this. Hardaway recommends rubbing the parts with borax. One of the alcoholic solutions recommended by Leloir for this purpose in herpes progenitalis may be used, namely, either two per cent. resorcin; one per cent. thymol; three per cent. menthol, or two per cent. tannin frequently applied.

Herpes progenitalis. This has been called herpes præputialis, but as it occurs in women as well as men and on other places than the prepuce, that name is obviously incorrect.

SYMPTOMS. The eruption is preceded and accompanied by burning and itching, and the vesicles occur in groups upon an erythematous base. If on the prepuce, that part is sometimes swollen. The vesicles are at first clear with serous contents, and if on moist locations, as under the prepuce or about the mucous membranes of the female genitals, they soon break down and leave tiny excoriations. There may be but one or several patches of herpes. The disease runs a course of eight or ten days and gets well of itself, unless irritated under the mistaken idea of its being a soft sore.

According to Bergh,[1] who has made a careful study of the disease, in women the groups usually contain five to eight pinhead- to hemp-seed-sized vesicles, but may have twenty to thirty-five millet- to poppy-seed-sized vesicles. Around each group is a reddish areola. The vesicles are isolated, and seldom confluent. Itching is apt to precede their outbreak. There may also be slight tenderness or swelling of the neighboring glands. In both sexes the patches may be unilateral, bilateral, or median. In men it occurs most frequently on the inner surface of the prepuce, then on its outer surface, the sulcus, glans, meatus, sheath of the penis, and rarely in the meatus. In women, Bergh found it most often on the labia majora, then the labia minora, and genito-anal region; seldom on the clitoris or in the vestibule; very rarely on the cervix uteri. Unna[2] gives the order of frequency as labia minora, clitoris, labia majora, introitus vaginæ et carunculæ myrtiformes, perineum, anal region, genito-crural fold, mons veneris, and mucous membrane of anus and vagina. The disease has a tendency to relapse, in men with each coitus, in women with each menstrual period. It is common in women to have herpes of the face at the same time, and this has been noted in men. In women herpes facialis may occur with one menstruation, and herpes progenitalis with another.

Etiology. The cause of the disease is congestion of the genital region. Thus in men it is frequently seen two or three days after each coitus; or accompanying a gonorrhœa or chancroid. A long prepuce seems to predispose to it. In women it comes in eighty per cent. of the cases with menstruation (Bergh), and in them it does not seem to have any marked relation to the sexual act. It is also seen in connection with pregnancy and the puerperal state, as well as in gout, constipation, and digestive disorders. It is a not infrequent disease. Greenough[3] met with it in men in about seventeen per cent. of all venereal cases in private practice. In women there are no

[1] Monatshefte f. prakt. Dermat., 1890, x., 1.
[2] Journ. Cutan. and Ven. Dis., 1883 4, i., 321.
[3] Arch. Dermat., 1881, vii., 1.

statistics from private practice, and, indeed, it is in this country but rarely reported. Both Bergh and Unna, however, met with it very frequently in public prostitutes in St. Petersburg and Hamburg.

DIAGNOSIS. The disease of itself is of little moment, but is of great consequence viewed from a diagnostic standpoint on account of its liability to be taken for chancroid or for the initial lesion of syphilis. This can hardly occur if the vesicles are seen, but when they are no longer present some difficulty may arise. From *chancroid* the superficial character of the lesions and their grouping point to herpes. In case of doubt the use of a simple dusting powder for a day or two will clear up the difficulty, because the chancroid will continue to enlarge while the herpes will become well. Auto-inoculation will afford positive evidence. From the *initial lesion* of syphilis herpes differs in the absence of all induration of its base and in the inflammatory character of the lesion. Here again a short wait will clear up the diagnosis.

TREATMENT. Herpes progenitalis will usually promptly disappear by the use of a dusting powder of bismuth, or oxide of zinc and starch; or by covering it with a piece of lint soaked in an astringent solution, such as a weak lotion of liquor plumbi subacetatis. If suppuration has occurred on account of bad treatment, and the glands are enlarged or tender, the patient had best be put in bed. Circumcision has been recommended to prevent recurrences, but is of doubtful efficacy. It is well to have the patient wash the parts daily and after coitus. Marriage and fidelity to the wife are good means of curing a relapsing herpes. Astringent washes are useful in both sexes. If the "habit" of herpes progenitalis, as it may be termed, has been formed, careful hygienic and general treatment may be necessary for a cure. Leloir's directions, as given under Herpes facialis, may be tried for aborting the disease.

Herpes Circinatus is either erythema iris or trichophytosis corporis.

Herpes Circinatus Bullosus was the name given by Wilson to what has since been called Herpes gestationis.

Herpes Cretacea. See Lupus erythematosus.

Herpes Exfoliomènes. See Lupus vulgaris.

Herpes Gestationis is regarded as being a dermatitis herpetiformis occurring during and provoked by pregnancy. It is generally relative with each succeeding pregnancy; and slowly subsides after delivery. Apart from its etiological relations, it corresponds closely to dermatitis herpetiformis, which see.

Herpes Imbrique. See Trichophytosis corporis.

Herpes Iris. See Erythema iris.

Herpes Parasitaires. See Trichophytosis corporis.

Herpes Phlyctænoides. See Zoster.

Herpes Tonsurans, see **Tonsurant.** See Trichophytosis capitis.

Herpes Tonsurans Maculosus. See Pityriasis rosea.

Herpes Zoster. See Zoster.

Herpétide Maligne Exfoliative. See Dermatitis exfoliativa.

Herpétide. This is a class of skin disease which depends upon what the French writers call the herpetic diathesis. The affections in this class are marked by long duration, obstinacy to treatment, tendency to relapse, and more or less pain and discomfort. Under it are included eczema, the lichens, psoriasis, and prurigo.

Hidrocystoma. This disease was formerly regarded as a pompholyx of the face, but Robinson[1] has shown that it is a separate affection.

SYMPTOMS. The eruption occurs upon the face in the form of a large number of discrete, disseminated, tense, clear, watery, boiled-sago-grain-like vesicles. In size they vary from that of a pinhead to that of a pea. In color they may be light yellow, of a bluish tint, or white. If pricked, a drop of clear acid fluid escapes. They are obtuse, round, or ovoid. If they are present in immense

[1] Journ. Cutan. and Gen.-Urin. Dis., 1893, xi., 293.

numbers, they may crowd closely together, but do not coalesce. There is no sign of inflammation about them, and no subjective symptoms arise from them, excepting, at times, a feeling of tension or smarting that is not pronounced. After lasting several weeks they dry up and disappear, while new ones appear.

FIG. 37.

Hidrocystoma.

The eruption is usually seen upon the lower part of the forehead, the orbital region, nose, cheeks, lips, and chin—that is, upon the middle regions of the face.

ETIOLOGY. The disease occurs most often in women,

and especially in washerwomen. It occurs also in men. I have seen one or two cases in grooms. It is worse in summer, often disappearing entirely in winter, to return in the following summer. It is a disease of adult life.

PATHOLOGY. The secreting portion of some of the sweat glands has an enlarged lumen from dilatation of the tube and contraction or compression of the epithelial cells against the basement-membrane, the lumen being filled with liquid, and a granular material resembling that usually seen in normal glands, but in increased amount. With the exceptions of those thus affected, the excretory apparatus is normal. (Robinson.)

TREATMENT. As far as possible the patient must avoid everything that will cause sweating. The individual lesions must be punctured.

Hirsuties. See Hypertrichosis.

Hives. See Urticaria.

Homines Pilosi, seu Sylvestris. See Hypertrichosis.

Honeycomb Ringworm. See Favus.

Horn. See Cornu cutaneum.

Hühnerauge. See Clavus.

Hyalome Cutané. See Colloid degeneration of the skin.

Hydrosadenitis Suppurativa Destruens. See Granuloma necrotica.

Hydradénomes Éruptifs. See Adenoma of sweat glands.

Hydroa is practically dermatitis herpetiformis. It is an old term recently revived, and is of uncertain significance. By some it is used to designate eruptions that are midway between erythema multiforme and pemphigus. As dermatitis herpetiformis certainly comprises what has been described as hydroa, I shall consider the latter no further.

Hydroa Bulleux. See Erythema iris.

Hydroa Vacciniforme. Hutchinson, under the name of "Recurrent Summer Eruption," Unna, under the name of "Hydroa Puerorum," and Bazin, under the name at the

head of this section, have described a bullous disease that occurs mostly in boys and upon exposed parts. It may occur on covered parts. It usually occurs in summer, and then seems to be due to the heat of the sun. It may occur in winter, and be due to the action of high winds. It is a symmetrical disease. The bullæ form as such or as the result of the confluence of vesicles, and commonly both vesicles and bullæ are present at the same time. The vesicles are prone to become depressed in the center and resemble vaccine scars. Scarring is apt to result. Usually there is no itching, but pain or burning. The disease recurs from time to time, the relapses at times being so frequent as to render the disease almost continuous, and tends to cease altogether as puberty is reached. The disease is related clinically to bullous erythema and to dermatitis herpetiformis, though it differs from them in leaving scars. Bowen has shown that it is inflammatory in origin.

The TREATMENT is not very satisfactory. The exposed parts should be protected as much as possible from the action of the wind and sun by means of veils or a calamine lotion. If bullæ form, they must be treated as in pemphigus.

Hygroma Cysticum Colli Congenitum. See Lymphangioma.

Hyperæsthesia. This is that condition of the skin in which pain is experienced on the slightest contact even of a current of air, in this differing from dermatalgia, in which the pain is spontaneous. When the sense of pain is exaggerated while the sense of touch is lessened, it is called *Hyperalgesia.* The hypersensitiveness may be for cold only, or for heat only, which is not so common. It is a neurotic disease, and is met with most commonly as a symptom of other diseases, such as non-tubercular leprosy, hydrophobia, and hysteria. Idiopathic cases are met with, though rarely. The hyperæsthesia may be general or localized, unilateral or symmetrical.

The TREATMENT is in most cases that of the disease of which it is but a symptom, and belongs rather to the domain of the neurologist than to that of the dermatologist.

Hyperidrosis. Synonyms: Ephidrosis; Idrosis; Sudatoria; Polyidrosis; Excessive sweating.

A functional disorder of the sweat glands characterized by an excessive flow of sweat.

Symptoms. Hyperidrosis may be general or localized; unilateral or symmetrical; in large or small amount. The cases of general sweating occur most often symptomatically in the course of general diseases, such as phthisis, malaria, and rheumatism, and do not concern us now. Some cases occur idiopathically. Such patients are usually fat. The hyperidrosis may be constant or at intervals, being excited by the slightest irritation of the nervous system, or by muscular exertion. The outburst of the sweat is generally preceded by a prickling sensation. It is often accompanied by prickly heat (lichen tropicus).

We are called upon as dermatologists to treat localized sweating more often than the just-described variety, and such cases occur most commonly upon the palms and soles, in the axillæ, about the genitals, and on the face and scalp. The excessive flow of sweat may be constant; but it is usually paroxysmal, and often under the influence of the emotions. It is usually more pronounced in warm than in cold weather. Fat people are more prone to it than are those who are thin; anæmic and delicate people rather than the robust. In some cases there may be a sense of tingling before the flow occurs. The affected part may be warm or cold; if the first, it is apt to be somewhat hyperæmic. Occurring in places that are warm and covered, bromidrosis is a common accompaniment. The disease may last for years.

Sweating palms usually feel cold and clammy. Sometimes the amount of sweating is only enough to keep them more or less constantly moist; sometimes it is so abundant as to drop from the hands and fingers, or even to fill up the hollow of the upturned palm and run over the edge. It spoils gloves, and interferes with many forms of work. Sweating soles are soon followed by tender feet, the epidermis becoming sodden, macerated, and removed. It interferes with walking. The edge of the foot just about the soles appears as a white or gray line or seam of sodden epi-

dermis with a pinkish seam above it. The sodden appearance is also well marked between the toes. Sweating in the axillæ spoils the clothing, and is only rendered worse by the rubber dress-shields so commonly worn by women. In its paroxysmal form it is frequently encountered in patients stripped for examination in public. This form has been aptly named by the French the "military sweat," as it is seen so often in examining recruits for the army. Sweating about the genitals is often accompanied by intertrigo, which may also occur in other parts subject to hyperidrosis where folds of skin are in contact. Sweating of the face is most commonly encountered upon the forehead, nose, and eyelids, beads of sweat standing out upon them or running off in little rivulets. It is here that hæmidrosis is most common. Upon the scalp it has been observed that its occurrence is frequently followed by loss of hair.

Unilateral sweating is occasionally met with. It may affect half of the forehead, face, or whole body. Upon the forehead and face this form of sweating occurs as an accompaniment of migraine and limited to the painful region; it is in paraplegia that one-half of the body alone is affected. Kaposi[1] has reported one case of hyperidrosis affecting only the upper half of the body.

ETIOLOGY. The disease is probably due to a disturbance in the sphere of the sympathetic system. It has followed lesions of the cerebro-spinal nerves. It occurs in all classes and conditions of men, and in all ages and both sexes. In some cases it is hereditary. Ill health seems to be the cause in many cases; it may be anæmia; chlorosis; lithæmia; hysteria; or general debility. In any case it is purely a functional disease of the sweat glands, they being structurally unchanged.

The DIAGNOSIS is so evident that we need not stop to differentiate it systematically.

TREATMENT. The condition of the patient's health is to be carefully investigated, and tonics, mineral acids, nux vomica, or other medicine ordered according to the nature of the case. If there is no indication for this plan, or it

[1] Arch. f. Dermat. u. Syph., 1899, xlix., 321.

does not succeed, recourse may be had to belladonna or atropia to the point of producing their full physiological effect; or pilocarpine one-twentieth grain, three times a day; or agaricin in doses of one-sixth grain; or ergot half a drachm of the fluid extract three times a day. Crocker has found a full teaspoonful of precipitated sulphur in milk twice a day the best remedy. If it loosens the bowels too much, he prescribes it as follows:

℞	Pulv. cretæ co.,	ʒiij;	25	
	Pulv. cinnam. co.,	ʒij;	15	
	Sulph. præcip.,	ʒj;	100	M.
Sig.	A teaspoonful twice a day.			

The local treatment of sweating hands and armpits in many cases is as unsatisfactory as the constitutional treatment. There have been many plans proposed. Local faradization is one agent. Very hot water may be sponged on for a few minutes; belladonna ointment or liniment may be rubbed in; or we may use some astringent application, as of subnitrate of bismuth, tannin, alum, sulphate of zinc, borax, and the like, in alcohol, ointment, or powder. As a rule, ointments cannot be used on the hands and face. The most reliable of these is probably a saturated solution of boric acid, or a three per cent. solution of salicylic acid. Kaposi speaks highly of the good effect of bathing the parts with a five per cent. solution of naphtol in alcohol, and keeping them powdered with one part of naphtol to one hundred of starch. Piffard recommends freshly prepared silicic hydrate, one part, in cold cream, nine parts. Sulphate of quinine, five per cent. in alcohol, may be tried. For sweating of the feet the best means are those given under Bromidrosis, which see. Permanganate of potash in one per cent. strength may be used. Unna recommends ichthyol in two and one-half per cent. ointment and the use of ichthyol soap. Formalin has its advocates. P. Richter[1] advises sprinkling tartaric acid between the toes and in the stockings for sweating of the feet; and painting with a ten per cent. solution of chromic acid every five days for sweating of the hands.

[1] Allg. Med. Centr. Zeit., 1897, lxvi., 927.

The PROGNOSIS is doubtful, many cases proving very rebellious to treatment.

Hyperkeratosis Excentrica. See Porokeratosis.

Hypertrichosis. Synonyms: Hirsuties; Trichauxis; Polytrichia; Dasyma; Trichosis hirsuties; (Fr.) Poils accidentels; Superfluous hair.

SYMPTOMS. Hypertrichosis is a growth of hair that is either abnormal in amount or occurs in places where, normally, only lanugo hairs are present. It may be general or partial, congenital or acquired. The *general form* is also congenital, but it is never universal, as no hair grows upon the palms and soles, the backs of the last phalanges of the fingers and toes, the inside of the labia majora, the prepuce, and glans penis. Subjects of this malady are usually born covered more or less thickly with hair, which may be light or dark in color. This continues growing longer, coarser, and darker till it reaches its full development. As a rule, the long hair covering the body is fine, resembling more the hair of the head than that of the beard, as is also the case with the hair on the face of these people. With this excessive growth of hair there is usually combined a deficiency of teeth, specially marked in the upper jaw. Subjects of this malady are called *homines pilosi*, and are met with in all quarters of the world.

Of *partial congenital hypertrichosis* we have an immense number of examples. This condition is apt to be of the nature of nævus. The distinction between a localized hypertrichosis and a nævus is made mostly upon the color of the underlying skin. In the former case the skin is perfectly normal, while in the latter it is pigmented and may be otherwise altered. These localized and partial cases of hypertrichosis are most frequently met with in the sacral or lumbar region, and not infrequently are associated with spina bifida.

Partial acquired hypertrichosis is more common than is the congenital variety, and takes the form either of an excessive growth of hair in regions where it is usually found, or of the development of hair in regions usually hairless or

provided only with downy or lanugo hair, or of the development of pubertal hair at an early age.

The following cases are instances of excessive growth and precocious development. Chowne[1] speaks of a boy, eight years of age, who had the whiskers of a man. Beigel[2] has seen a six-year-old girl with pudenda like a twenty-year-old woman, both in shape and hair. A case of excessive growth was met with by Leonard[3] in a man whose beard measured seven feet six and a half inches in length. Other instances of excessive length of beard are found in medical literature.[4] Many men have an excess of hair upon the chest and shoulders. Hair is generally better developed upon the forearm than upon the upper arm, and upon the legs than upon the thighs. As men grow old they are apt to have long hairs grow from the nostrils and the ears. These are instances of the growth of strong hair where normally only lanugo hairs are present.

The growth of the beard in women is the form of hypertrichosis which concerns us most, as it is the deformity which we will be called upon to cure. As women grow old, especially after they have passed through the climacteric period of middle life, a slight mustache or a few straggling dark hairs on other parts of the face often appear. These growths seldom annoy them much, as they are accepted as evidences of advancing years. The case is very different when a young woman is afflicted with a beard, and most of the patients who apply for relief from their facial hair are between twenty and thirty-five years old. In them the hair generally begins to grow so as to be noticeable at about the eighteenth year of age. To get rid of the trouble the tweezers are first resorted to; then depilatories are tried; sometimes burning is attempted, and as a final refuge a razor is used. All the time the hair grows coarser and more abundant. Some of these women shun company, keep themselves shut up all day, their health deteriorates, and, constantly brooding over

[1] Lancet, 1852, i., 421. [2] Virchow's Archiv, 1868, xliv., 418.
[3] The Hair: its Diseases and Treatment. Detroit, 1881.
[4] Jackson: Diseases of the Hair and Scalp. New York, 1887.

their misfortune, they are prone to become hypochondriacal and melancholic. The amount of hair present in these cases varies. Perhaps the commonest growth is the mustache alone. In most of my cases the hair has grown thickest and coarsest under the chin and upon the front of the throat. It is rare, even in the best developed cases,

FIG. 38.

Hirsuties.[1]

to have much hair under the lower lip. Sometimes the growth is as complete, as heavy, and as coarse as is met with in men. The skin in many cases is coarse, muddy, greasy, and studded with acne.

From time to time cases of transitory hypertrichosis have been reported. This has been noticed during the

[1] By the courtesy of Dr. S. Dana Hubbard.

treatment of a recurrent form, the hair being much more [illegible] that has been kept quiet and warm. [illegible] the increase is probably more apparent than real, the hair not having been rubbed off or pulled. Likewise, after injury to nerves the hair sometimes becomes hypertrophied, only to fall out after [illegible] limited irritation of a part, as by blisters, may stimulate hair-growth which may or may not be transitory. The most interesting of this group of cases is that surprising mass of hirsuties occurring during pregnancy and disappearing after some months. Wilson reported a case of early appearance of menstruation in which hair grew upon the face. After the menstrual function was established the hair ceased to grow and gradually disappeared.

Etiology.—The cause of hypertrichosis is very obscure in some of its forms, while in other varieties we can more readily [illegible] congenital hirsuties heredity plays an important part. Such hereditary tendencies will be explained by the [illegible] of these congenital cases. Virchow [illegible] upon the theory of [illegible], founded upon the fact that in the Kurnai people —a markedly hairy father and son—the [illegible] of the teeth and jaws was in the same [illegible] as the over-development of the hair on the forehead, [illegible], and ears; these regions all being supplied by [illegible] of the trigeminus or fifth cranial nerve. Unna's theory of congenital hypertrichosis is that it is due to a persistence of the fetal or primitive hair; the change of type between the primitive and permanent hair not taking place.

The cause of acquired hirsuties is, in some cases, not far to seek. Heat and moisture will apparently increase the growth of hair, just as they favor the growth of vegetable life. Thus the hair has grown luxuriantly under the stimulation of poultices, and on the limbs when confined in a fracture box. To these factors must be added an increase of [illegible] of blood to the part. Increase of the flow of [illegible] stimulate hair-growth independently of heat [illegible]. At least Prentiss's case of hair growing

more luxuriantly and coarser under the use of pilocarpine, which causes hyperæmia of the skin, would seem to indicate this. Hypertrichosis following injury to nerves is probably dependent upon vasomotor disturbances. The growth of hair upon exposed parts, as upon the arms and chest of laboring-men, sailors, and the like, is due to the local irritation of the sun and wind.

Now we come to the more obscure cause of facial hirsuties in women. To account for this, numerous hypotheses have been formed. Probably the one most generally accepted is that it is in some way connected with derangement of the uterus and appendages. Because in some bearded women there has been some evident derangement of the sexual organs, it has been affirmed that some similar derangement is present in all. This is on a par with the too loosely accepted idea that the too free use of alcohol is the only cause of rosacea. In the cases I have met with, the majority were as free from uterine trouble as the rest of their sex. While it is true that some of these women are of masculine build, and have a masculine voice, most of them do not exhibit these characteristics. In some cases, however, there does seem to be some relation between the reproductive organs and the growth of the beard. Heredity is well marked in the majority of cases. It is improbable that attempts at destroying the fine hair cause the development of the coarse hair. It is more likely that they only strengthen its growth. Women are prone to trace the appearance of hair on the face to the use of vaseline, cold cream, and the like. There is no scientific foundation for this.

An interesting study of the relation between hirsuties in women and insanity was made by Hamilton.[1] He regards hair-growth on the face in women as the inevitable result of the over-active and continuous exercise of the uterine and ovarian functions. He believes it to be of neuropathic origin, connected with disorders of the fifth cranial nerve; and that when it occurs upon the face of an insane person it is indicative of an unfavorable form of insanity, especially if the subject has not reached middle life.

[1] Med. Rec., 1881, xix., 281.

We may sum up the evidence on the etiology of facial hirsuties in this way: While at times there appears to be a relation between the uterine, or, more properly, the menstrual function, and the growth of hair on the face, shown by a decrease or deficiency of the first, and an increase of the second, still in the majority of cases no such relation is discoverable, and it must be viewed as a deformity, or a freak of Nature, or as a matter of inheritance.

TREATMENT. For general hypertrichosis we can practically do nothing. This, not because we cannot destroy hair so that it will not grow again, but because of the great amount of time it would take to destroy it.

The only form of hirsuties which urgently calls for relief is that occurring upon the face of women. In 1875 Dr. Michel, of St. Louis, devised the method of removing the hairs in trichiasis by means of electrolysis, which was taken up by Dr. Hardaway, of the same city, for the removal of superfluous hair. The question is often asked: "Is the removal, by this method, permanent?" This question may be answered, "It is, without a shadow of a doubt." The object being to destroy the papilla, and that being very small and often placed at an unexpected angle to the surface of the skin, it is not possible always to accomplish this at the first attempt; but with patience and the necessary skill it will finally be permanently destroyed. At times, after the dark, coarse hairs have been removed, there will be found a number of finer and lighter hairs. This appearance is due partly to the uncovering of these hairs, and partly, it may be, to lanugo hairs becoming stronger under the stimulation of the operation. In most cases, with proper care and the use of a fine needle, the amount of scarring will be very slight, amounting to nothing more than fine punctate cicatricial spots. In some peculiarly irritable skins it is very difficult to prevent the formation of plainly visible scars. The upper lip is also prone to scarring. If the proper conditions are not observed, the operator must expect to produce a good deal of disfigurement.

The amount of pain experienced by the patient will

vary greatly. Certain parts of the face are far more sensitive than others. On the whole, the pain does not amount to much. After a time the skin seems to become tolerant of the action of the current and the patient no longer complains. Hyperpigmentation may be produced by the operation. This is a very rare complication, and is mentioned only by way of warning.

The instruments needed for the operation are a good twenty-cell zinc-carbon (galvanic) battery, a sponge electrode, a proper needle-holder, a fine needle, a pair of epilating-forceps, and, if the operator's eyes are not good, a lens of low power. Any sponge electrode will answer. There are various patterns of needle-holders, any one of which may be used. It should be long enough to be held with ease, and not too long to be readily manipulated. The most essential instrument is the needle. Hardaway recommends a needle made of iridium and platinum. He claims that it will follow the direction of the hair follicle, and more surely hit the papilla than will a steel needle. I have had most satisfactory results with a jeweler's instrument called a "steel broach." These come in many grades; those known as Nos. 5 and 7 are serviceable ones. A lens is generally not needed. Dr. Piffard has invented a needle-holder with lens-attachment, which he has found useful. If one's eyesight is not good, he had best wear spectacles furnished with large lenses. A galvanometer is not essential, but very desirable.

A good light is necessary for the operation, and a cloudy day is a bad one for working. An operating-, reclining-, or dentist's chair is a comfort, and the patient should be so placed that the part to be operated on is on a level with the operator's eye. The operation is done in the following manner: The patient, being in position, is to be given the sponge electrode attached to the positive pole of the battery, and told to hold it in one hand. The hair to be extracted is then seized with the forceps, and put slightly on the stretch *in the direction in which it naturally grows.* The needle, attached to the *negative pole,* is then inserted parallel with the hair and into the follicle. One soon learns to know whether the follicle is entered or not by the sense of touch.

When the follicle is entered the needle glides along smoothly; when it is not entered a sense of resistance is communicated to the fingers as the skin is punctured. The depth to which the needle is to be thrust will vary with the case. Roughly speaking, it is from one-sixteenth to three-sixteenths of an inch. The needle being inserted, the patient is told to place the palm of the disengaged hand over the sponge electrode. In a few moments there will be frothing about the needle, and in from half a minute to a minute or more the hair will come away upon *the very slightest traction*. The hand is to be removed from the sponge before the needle is withdrawn from the follicle. The hair must not be pulled on with any force, for the ease with which it leaves the follicle is evidence of the completeness of the operation. The hairs must not be extracted in close proximity, because the inflammatory action thus set up will lead to more or less deep ulceration and subsequent prominent scars. It is best to extract only the coarser hair, and to leave the lanugo hairs alone. The strength of the current to be used will depend upon the quality of the patient's skin and the recentness of the filling of the battery. Six cells are the fewest I have used, and fifteen the greatest number—more exactly, a current-strength of one to two milliampères.

Immediately after operating the part worked on should be washed with peroxide of hydrogen or an antiseptic solution. The patient should be directed to bathe the face in *hot* water and to anoint it with cold cream several times during the day following the operation.

T. Bloebaum[1] advocates the use of galvano-caustic needles as superior to electrolysis for the destruction of hair. A special needle is used by him, and he destroys one hundred hairs in fifteen minutes. He claims for his method not only greater celerity, but also less scarring and pain. The micro-brenner of Unna has its advocates. Of late, the *x*-rays have been used to destroy hair, and apparently successfully. The operation has to be often repeated, sometimes as many as thirty to forty times. There is always danger of dreadful scarring from their use, but

[1] Deutsche med. Zeit., 1897, xviii., 609.

improvement in technique is constantly lessening this danger.

Hypohydrosis. See Anidrosis.

Hystricismus. See Ichthyosis.

Ichthyosis. Synonyms: Xeroderma; Xeroderma ichthyoides; Ichthyosis vera, seu congenita; Sauriasis; (Fr.) Ichthyose; (Ger.) Fischschuppenausschlag; Fish-skin disease.

Ichthyosis is a congenital, general or partial, chronic disease of the skin, characterized by dryness, harshness, and scaling of the skin, and sometimes by the development of warty-looking growths.

SYMPTOMS. Though the disease is congenital, it usually does not show itself until after the second month, and sometimes not until the second year. There are three varieties of the disease, namely, xeroderma, ichthyosis simplex, and ichthyosis congenita.

Xeroderma is the mildest grade of the disease. The skin is dry, harsh, slightly scaly, grayish or dirty-looking, and its natural lines are more pronounced than usual. Upon the extensor surfaces of the limbs it is particularly marked, and here too it is accompanied by keratosis pilaris. It is most annoying to young women who want to wear short-sleeved dresses. It is doubtless far more common than statistics show, as it very often is slight in amount.

Ichthyosis simplex. This is a more severe grade of the disease in which the skin is dry, harsh, and scaly, and also divided off into small diamond-shaped or polygonal figures (Fig. 39). While the whole cutaneous surface may be involved, the disease is usually most pronounced upon the extensor surfaces of the legs and arms. The face, scalp, palms, and soles are often spared. The skin about the extensor surfaces of the elbows and knees is generally thrown into well-marked folds, while the flexor surfaces of the same joints are unaffected, the skin in these situations being soft and natural. While upon the extremities the disease is well developed, upon the trunk it may assume more of the xerodermatous form. When the face and scalp are affected they are simply very scaly, while on the

palms and soles we have accentuation of the normal lines. In a typical case the skin, especially of the extremities, will be grayish, greenish, or blackish green in color, dry, and the little polygonal plates will be attached at their centers and turned up slightly at their edges, so that they appear depressed in the centers. The amount of loose

FIG. 39.

Ichthyosis.

scaling is sometimes abundant, but usually moderate in amount. The hair, if the scalp is involved, is dry. The nails are often pitted. Ectropion may result in those rare cases in which the disease affects the face severely. Itching is often complained of, and eczema may complicate matters. There are a marked absence of perspiration and lessened sebaceous secretion; and the patients are sen-

sitive to cold. The disease is usually worse in cold weather.

Ichthyosis hystrix used to be described as one form of ichthyosis. It is now regarded as a separate malady, and has received many names, such as nerve nævus, nævus verrucosus, neuropathic papilloma, papilloma neuroticum, and papilloma lineare. The latter is the preferable title, which see.

Ichthyosis congenita is the most rare form of the disease. It is also called Keratoma follicularis, Keratosis diffusa, seu epidermica, seu intra-uterina, and the "Harlequin fœtus." It is considered by some to be a general seborrhœa. It is present at birth, the skin being covered with fatty epidermic plates cracked in all directions and arranged transversely to the axis of the body. The fissures may extend into the corium. The eyes are held partly open, or there may be ectropion; the lips cannot be moved; and the feet are contracted and deformed. The color is yellowish white or grayish. The scrotum and penis may not be involved. These infants are either born dead or survive birth but a short time, though S. Sherwell has reported one case that was living at five months of age.

There are also cases of *ichthyosis intra-uterina* in which, after the removal of the vernix caseosa, the skin looks red, glazed, and dry, and soon assumes the characteristics of ichthyosis simplex.

With the exception of ichthyosis congenita, the disease does not show itself until some months after birth, but by the second year it has made its appearance. As a rule, it increases in severity as the patient grows older, until adult age, when it usually remains stationary or perhaps improves a little. It is a chronic disease and shows no tendency to get well. It does not seem to affect the patient's health, and it should be regarded rather as a deformity than a disease. Occasionally mental weakness and other congenital defects have been noticed.

Etiology. We know of no cause for the disease beyond heredity, which may be direct, skip a generation, or be through a lateral branch. Many cases occur without manifest heredity. It attacks both sexes about equally.

[redacted]

PROGNOSIS. The prognosis is good as to life, bad as to cure. Thus far it has proved incurable. All one can hope to accomplish is to render the patient comfortable and fit to mingle with his kind by repeated courses of treatment. Ichthyosis congenita is fatal in a few days, if the child is not born dead, as is usually the case.

Ichthyosis Follicularis. See Keratosis follicularis.

Ichthyosis Sebacea. See Seborrhœa sicca.

Idrosis. See Hyperidrosis.

Ignis Sacer. See Zoster.

Impetigo is a name that was applied at one time to all pustular eruptions. At the present time there are four varieties described, namely, impetigo or impetigo simplex; impetigo of Bockhardt; impetigo contagiosa; and impetigo herpetiformis. The right of the first-named variety to be recognized as a distinct affection is denied by systematic writers of all nations but our own. Our own writers largely follow Duhring in their description of the disease, and as soon as they vary from his description, it seems to me that, instead of simple impetigo, they describe the contagious form. I have never recognized a case, and shall here follow Duhring.

Impetigo Simplex. The appearance of the disease may or may not be preceded by loss of appetite, constipation, or malaise. The eruption consists of one to a dozen or more pustules that are pustules from the beginning. They are split-pea to finger-nail in size, rounded, and raised above the surface of the skin. They have thick walls, a more or less marked areola, little surrounding infiltration, and no central depression. Their color is yellowish or whitish. They manifest no disposition to rupture, are discrete and disseminated, and do not incline to coalesce. While they may occur anywhere, they are seated by preference on the face, hands, feet, and lower extremities. Itching and burning are absent, as a rule. The course of the disease is acute, its duration being several weeks. The pustules gradually undergo absorption and

dry into a crust, or they may be ruptured by external injury. The crust when it falls leaves a reddish base without pigmentation or scar. The disease is not contagious, and occurs mostly in children.

Such is the disease as described by Duhring. It will be seen by reading the next section that it bears a strong resemblance to impetigo contagiosa. He differentiates it from impetigo contagiosa on account of its being pustular and not vesico-pustular from the start, its deeper seat, and its being more raised and not umbilicated.

Impetigo of Bockhardt. The best description of this form of impetigo is by Sabouraud.[1] He describes it as occurring primarily on hairy regions, usually the scalp, as an eruption of pustules pierced by hairs. They are confluent or disseminated. They are yellowish green, rounded, umbilicated or acuminated, and vary from millet to pea size. There is an areola about the young pustules which diminishes with their age. They are not readily broken. They reach full development in three to five days, the crust falling in a week. A folliculitis is often left, or a furuncle or abscess follows. There is sometimes a dermatitis of the scalp of severe grade, and the glands of the neck are often swollen. The disease may spread from the scalp to the face, neck, back, thighs, and buttocks. It is due to infection with the staphylococcus aureus.

Impetigo Contagiosa. Synonyms: Porrigo contagiosa; Impetigo parasitica; Pemphigus acutus contagiosus adultorum.

An acute, inflammatory, contagious disease, occurring especially on the face, hands, and exposed parts, and characterized by the appearance of vesico-pustules and bullæ.

Symptoms. By Tilbury Fox, who first described the disease, and others who followed him, its onset is said to be marked by slight febrile disturbances. These are very slight, and I have not satisfied myself as to their occurrence in the many cases that I have seen, except incidentally as part of some digestive disorder that may be present.

[illegible]ion consists of vesico-pustules that come out in

[1] Ann. de derm. et de syph., 1900, i., 62 and 427.

crops. They are of various sizes, but average that of a split pea. They are at first surrounded in well-marked cases with a red halo, which soon fades. They tend to

FIG. 40.

Impetigo contagiosa.[1]

increase slowly in size, and sometimes assume an annular shape. They are not fully distended, but flaccid, and not infrequently upon the hands they bear a strong resemblance to a burn of the second degree. If the covers of the vesicles or small bullæ are not disturbed, their contents in a few days will dry up, and the vesico-pustule will change into a straw-yellow granular crust, which is placed superficially upon the skin with its edge somewhat detached, and, it may be, turned up—in fact, it looks

[1] G. H. Fox: The Skin Diseases of Children. New York, 1897.

"stuck on." When the crust is removed or falls of itself, there is exposed an erythematous spot, which in a short time will disappear and leave no trace of its existence. If the vesicles are torn by scratching, or if by any other means their covers are removed, we shall find very superficial losses of substance—a moist surface covered with a slight purulent secretion or crusted lesions. Even this disappears and leaves no trace, passing through the erythematous stage in its course to recovery. Such are the appearances presented in the majority of cases. In adults the lesions sometimes assume a circinate form, but the ordinary impetigo lesions are also present.

Besides this usual and typical form we meet with another and rarer variety, in which, instead of vesico-pustules, there are larger bullæ. These may be several inches in their long diameter, are of irregular oval shape, not fully distended with fluid, and sometimes show a slight depression in their centers. Their contents are at first serous, but soon become sero-purulent. They seem to be longer preserved than the vesicles, but otherwise run the same course. At first they have a slight zone of redness about them, but this soon disappears. They either are formed by two or more vesico-pustules running together, or spring up of themselves. They may attain their full size at once, or increase slowly. Rarely do they exist alone; generally the typical vesico-pustules will be found in their neighborhood or elsewhere on the body. It is the bullous form that is liable to be mistaken for pemphigus.

Impetigo contagiosa is located principally upon the face, most often on the chin, and on the hands; it may also occur upon the scalp, legs, and trunk, especially in infants. According to my experience, the bullous form is most often seen upon the trunk. The lesions of both varieties are discrete; exceptionally two or more may run together. They are superficial, and rarely very numerous. The bullous lesions are generally widely separated from one another. The disease does not run any definite course, and may last weeks or months; a slight amount of itching is sometimes present.

Etiology. It is, as its name indicates, very conta-

gious, and often occurs in epidemics. When one case is met with in dispensary service, several more may be expected in children of the same family or neighborhood. It is readily inoculable both on the subject of the disease and on others. Not infrequently we see a mother or other attendant of a child with the characteristic lesions of impetigo contagiosa upon the arms, derived from carrying the child suffering with the same disorder. The contagious element is a micro-organism. We know that all pus is under certain circumstances inoculable, and hence it has been maintained that there is no such disease, properly speaking, as contagious impetigo. But when we succeed in inoculating from an ordinary pustule, we produce an ordinary pustule, not the characteristic vesico-pustule of impetigo contagiosa. It has been stated by some authorities that the disease is due to an inflammation set up by lice on the head of the particular case or can be traced back to some other case of pediculosis. In some cases phtheiriasis capitis may be present, because both diseases occur with special frequence in children of the poor. In my own experience, in most cases no such relationship can be traced. Cases of contagious impetigo sometimes follow vaccination, and thus has been suggested the possible connection between impetigo and vaccinia. It is more frequent in the warm months than in the cold. Children furnish the vast majority of the cases.

Pathology. By most observers the disease is thought to be due to staphylococcus aureus. Kauffmann[1] thinks he has found a staphylococcus that differs from the ordinary staphylococcus pyogenes in its cultures, in its less resistance to destructive agencies, in its inoculations producing vesicles and not pustules, and in being less virulent. Sabouraud[2] and others believe it to be due to streptococcic infection; while still others have found now the one and now the other form of cocci in the disease. It is evident we need still more light on this subject.

Diagnosis. Impetigo contagiosa is diagnosed by the presence of discrete, partially distended vesico-pustules,

[1] Dermat. Zeitschrift, 1899, vi., 792.
[2] Ann. de derm. et de syph., 1900, i., 62.

forearms, about the umbilicus, on the nipples of females and the genitals of males; that scratched papules and pustular lesions are more characteristic of it than vesicles, and that it presents the pathognomonic furrows, we should not confound it with impetigo contagiosa, which has none of these symptoms. Further, impetigo will, in almost all cases, occur upon the face at the same time as upon the hands, and that location is very rarely attacked by the itch mite.

The diagnosis from *pemphigus* is by no means always easy. The occurrence of the bullous form of contagious impetigo is so rare that it is no wonder it is mistaken for pemphigus. Indeed, it is probable that not a few of the cases reported as acute pemphigus in children, which possessed apparent contagious qualities, were instances of this bullous form of impetigo. The diagnosis between the two diseases can scarcely be made with certainty by the appearances of the bullæ alone; we must also take into consideration the general course of the disease. The differential diagnosis may be given as follows:

PEMPHIGUS.	IMPETIGO CONTAGIOSA. (Bullous form).
1. Occurs chiefly in adults.	1. Occurs chiefly in children.
2. No source of contagion can be found.	2. A source of contagion can usually be found.
3. No particular sites of preference; if anything, it is most frequent on the extremities.	3. Met with most often upon the trunk; sometimes it may occur on the face, hands, or extremities.
4. Chronic in its course; marked by frequent relapses; may return from year to year.	4. Acute in its course, rarely lasting more than a few weeks.
5. Bullæ are fully distended with a clear fluid, so that their covers appear tense. They often spring up out of the sound skin without areola.	5. Bullæ not fully distended, but flaccid, and contain sero-purulent fluid. They may have a well-marked red halo while slowly attaining their full size. Characteristic vesico-pustules are generally present elsewhere at the same time.
6. Lesions often occur in great numbers, so as to cover the whole body, and at times are pruriginous.	6. Lesions few in number, do not involve the whole body, and itch but little, if at all.
7. Disease obstinate to treatment, and prognosis usually grave.	7. Disease yields readily to treatment; prognosis uniformly good.

Ecthyma is probably only a form of impetigo contagiosa that occurs in broken-down subjects. It affects by preference the lower extremities, is seen most often in adults,

and its lesions are deep pustules which are highly inflammatory and painful.

TREATMENT. The treatment of the usual form is to direct the affected parts to be scrubbed with warm water and soap to remove the crusts, and covered with a five per cent. carbolized vaseline, or with oxide of zinc ointment with carbolic acid in the same strength, or with the ointment of the ammoniate of mercury in full strength or diluted one-half. If there is a good deal of crusting, the crusts may readily be removed by soaking them with oil or warm water, after which the applications mentioned may be made. Salicylic acid may be used in ointment in three to five per cent. strength. When there is an eczema complicating matters Lassar's paste answers all indications. In the bullous form it is well to prick the bullæ at their most dependent part, and let the fluid escape, after which the lesions may be treated as just indicated.

PROGNOSIS. The prognosis of impetigo contagiosa is always good; so readily is it cured that the patients seldom present themselves a third time for advice.

Impetigo Granulata. See Pediculosis.

Impetigo Herpetiformis. This disease was first described by Hebra[1] in 1872.

In this country it is exceedingly rare, only a few cases having been reported. It is from Kaposi[2] that the account here given is taken.

The disease begins with an eruption of pustules in the genito-crural region, about the umbilicus, on the breasts, and in the axillæ; later upon various other locations. The pustules are crowded together, grouped, pinhead size, with at first opaque and later greenish-yellow contents. They dry into a dirty-brown crust, while immediately around them new pustules appear in double or threefold circles, by the drying of which the crust is enlarged. The disease spreads by the growth of the individual groups and by the coalescence of neighboring ones. Underneath the crusts the skin appears red and covered with new epi-

[1] Wien. med. Wochenschr., 1872, No. 48.
[2] Pathologie und Therapie der Hautkrankheiten.

dermis; or deprived of epidermis, moist, infiltrated, and smooth; or papillary, but never ulcerated. Within three or four months nearly the whole cutaneous surface is involved, swollen, hot, covered with crusts, showing torn and excoriated places, with here and there circles of pustules. The mucous membrane of the tongue may show circumscribed gray patches. There is a continuous remittent fever, and each outbreak of pustules is marked by chills, high fever, and dry tongue. Nearly all cases prove fatal. The disease has affected almost exclusively pregnant women, few men having been reported with the malady. Delivery has not stopped the course of the disease. It is probably of septic origin.

DIAGNOSIS. The disease is stated by Kaposi to differ from *dermatitis herpetiformis* in being only pustular; in its peculiar location and manner of spreading; in the absence of itching; in the severe constitutional symptoms; and in its lethal ending.

TREATMENT. No treatment has proved successful. We can only do our best to nourish the patient; and by means of baths, dusting powders, or alkaline lotions render her as comfortable as possible.

Induratio Telæ Cellulosæ Neonatorum. See Sclerema neonatorum.

Inflammatory Fungoid Neoplasm. See Mycosis fungoïdes.

Intertrigo. See Erythema intertrigo.

Iodic Acne. See Dermatitis medicamentosa.

Itch. See Scabies.

Juckblattern. See Prurigo.

Kahlheit. See Alopecia.

Kelis. See Keloid.

Keloid. Synonyms: Kelis; (Fr.) Cancer tubéreux, Chéloide; (Ger.) Knollenkrebs.

A connective-tissue new growth in the skin, occurring most commonly upon the chest; characterized by hard-

ness, by a pinkish color, and by sending off prolongations in all directions. (Fig. 41.)

Symptoms. It is usual to divide keloids into two varieties, one of which is called the true or spontaneous keloid, and the other the false or secondary keloid the result of injuries. Of late the opinion is gaining ground that no such distinction can be made, and that even the true keloid results from some slight injury. As most

Fig. 41.

Keloid.[1]

commonly met with, it consists in a single, firm, hard, pinkish, freely movable, oval or elongated, elevated tumor upon the upper half of the sternum, from which claw-like processes are given off in all directions. While there may be but one tumor, the lesions may be multiple, there being either one large and several small ones upon the chest, or

[1] From G. H. Fox's Photographs of Skin Diseases.

many scattered over the body. They begin as small pinkish elevations and gradually enlarge until they attain a certain size, when they may remain stationary or else slowly grow. They assume all sorts of shapes and sizes. Sometimes they have an even surface, sometimes they are nodular. They may be quite small, or they may be so large as to run nearly half-way across the chest. Then the appearance is as if the skin were drawn up into the tumor. The epidermis is smooth over them, and the pink color is due to dilated blood vessels. Sometimes the color is white. Though they are rarely met with on the face in the white races, they are very common upon the face of the negro. They are often attended by a good deal of pain, or pruritus, or pricking sensations.

Beside this form of keloid, that may or may not be spontaneous, we have the evident *scar keloids* that occur over the site of an injury to the skin. These have followed syphilides that have destroyed the skin, variola pustules, psoriasis, a blister, or acne.[1] They may be limited to the site of the previous lesion or spread beyond it. This form of keloid is very often seen on the face of the male negro who shaves, the cheeks and chin being studded over with small, hard, white elevations. The *hypertrophied scar* resembles keloid, but never spreads beyond the limits of the injury, has no claw-like processes, is not so pinkish nor so permanent.

Etiology. We know scarcely anything as to the cause of keloid, and can only beg the question by saying that it is a predisposition on the part of the skin. It is probable that some minute injury precedes the tumor. The negro race is peculiarly prone to the disease. Sex is without influence, and it may occur at any age, though rare before puberty and in old age. Histologically the structure of the keloid is similar to that of the cicatrix—that is, it is a dense fibrous connective-tissue growth which has its seat in the true skin.

Treatment. As a rule, it is safest to leave the growths alone. Cutting them out is often disappointing in its results, as they are apt to return. Multiple scarifications

[1] Purdon: Journ. Cutan. and Ven. Dis., 1882-3, i., 203.

followed by the application of acetic acid have been successful. Leloir and Vidal[1] recommend following multiple scarifications with a boric-acid dressing. The next day mercurial plaster is to be applied, and changed every morning and evening. Perseverance in this method, they say, may result in a cure. Compression by means of an elastic bandage or by mercurial plaster sometimes reduces the prominence of the tumors. Hardaway has succeeded in removing one keloid and two hypertrophied scars by means of electrolysis, and Brocq has commended the method. A stout needle must be used and multiple punctures made in all directions, and in the tissues for a space beyond the tumor. Galvanism is said to reduce hypertrophied scars. Balzer and Mousseaux[2] recommend the use of a twenty per cent. solution of creosote in oil. A cubic centimeter of the solution is to be injected into many points until the tumor pales. This is followed by inflammation, swelling, and sloughing off of a portion of the keloid, and rather deep ulceration. After a few days the ulcerations are healed and the injections are repeated. Andeer[3] recommends resorcin and a bandage. S. Tousey[4] advocates the use of thiosinamin, and reports some favorable cases. It may be used either hypodermically once a day or every other day, twelve to fifteen minims of a ten per cent. solution in equal parts of pure glycerin and sterilized water; or by the mouth, three grains being given during the day. I have tried this treatment in a number of cases without benefit. Unna recommends thiosinamin plasters. Hypodermic injections of morphine, or the application of belladonna ointment, may be necessary to relieve pain.

Prognosis. It is possible for hypertrophied scars to undergo spontaneous involution. This is especially the case in the scar keloid following syphilis. Usually this cannot be expected in true keloids.

Keloid of Addison. See Morphœa.

[1] Ann. de derm. et de syph., 1890, i., 193.
[2] Ibid., 1898, ix., 1147.
[3] Centralbl. f. med. Wissenschaft, 1888, xxvi., 785.
[4] New York Med. Journ., 1897, lxvi., 624.

Keloid of Alibert. See Keloid.

Keratoangioma. See Angiokeratoma.

Keratodermia Excentrica. See Porokeratosis.

Keratolysis Exfoliativa is the name applied by A. Sangster[1] to a case of congenital exfoliation of the skin which resembled ichthyosis, excepting that its scaling was more papery, like that seen in dermatitis exfoliativa.

Keratosis Circumscripta. See Ichthyosis.

Keratosis Diffusa seu **Epidermica.** See Ichthyosis congenita.

Keratosis Follicularis. This is a rare affection of the skin to which especial attention has of late been given. It is probably the same as was described by Guibout by the name of *acné sebacée cornée*, and by Lesser as *ichthyosis follicularis*. The French have named it *psorospermose folliculaire végétante*, but as this title was given it by Darier and Thibault in 1889, under the idea that it was due to psorosperms, which have been shown to be only degenerate epithelium, and as Morrow[2] had already reported a case in 1886, with the title of keratosis follicularis, and White[3] another in 1889, under the same title, it seems to me best to retain their title.

Symptoms. The disease affects nearly the whole cutaneous surface, though in both Morrow's and White's cases the palms and soles were free. The eruption begins as pinhead-sized papules, which are firm and of the color of the skin. As they increase in size they become hyperæmic; still growing, they become hemispherical or flattened, with smooth or polished, dense adherent coverings of nail-like consistence, and varying in color from dull red to purplish, dusky red, brown, and brownish black. Some of them are excoriated by scratching and bear hemorrhagic crusts. These lesions [illegible] skin about them normal. They are loc[illegible] In places the lesions

[1] Brit.
[2] Journ.
[3] Journ.

run together and form elevated areas with uneven surfaces and covered by thick yellowish or brownish, flattened horny concretions; or there may be brownish or blackish plates. The patches feel rough and somewhat greasy. Here and there will be found papillomatous excrescences; or enormously dilated follicular openings filled with comedo-like, firm, slightly projecting concretions forming hemispherical elevations, which when expressed are found to be hard and perfectly dry, leaving the follicle mouth patulous. The nails are coarse, slightly thickened, and ragged at their free edges. Boeck[1] says that they are often the seat of a marked hyperkeratosis without a trace of the disease itself anywhere in their neighborhood. The hard palate in White's case showed some follicular elevations. Pruritus is marked in some cases. A fetid odor is given off from the patient.

Upon the scalp the disease appears for a long time as a seborrhœa sicca, but later the same elevations about the hairs can be made out as are seen upon the general integument. Upon the back of the hands and fingers the eruption presents the appearance of simple papillary growths, little pale-white, slightly raised, confluent and adherent masses. Upon the palms and soles, instead of elevations, we find punctate depressions, and perhaps a hyperkeratosis. In the axillæ, on account of maceration by sweat, the masses are not so hard and horny, and the scales can be rubbed off, when a moist, red, warty surface is exposed.

The course of the disease is a progressive one by the springing up of new lesions. It develops symmetrically. It seems to have no damaging effect on the health. It affects specially the scalp, axillæ, inguinal region, abdomen below the umbilicus, back of the hands and feet, and the wrists.

Etiology. We know nothing positive about the etiology of this rare affection. White met with it in a father and daughter, and that would suggest the idea of heredity. The disease may begin at any age, cases having been reported as commencing in the first weeks of life, in the sixth, sixteenth, twenty-second, twenty-seventh, and thirty-

[1] Arch. f. Dermat. u. Syph., 1891, xxiii., 857.

Keloid of Alibert. See Keloid.

Keratoangioma. See Angiokeratoma.

Keratodermia Excentrica. See Porokeratosis.

Keratolysis Exfoliativa is the name applied by A. Sangster[1] to a case of congenital exfoliation of the skin which resembled ichthyosis, excepting that its scaling was more papery, like that seen in dermatitis exfoliativa.

Keratosis Circumscripta. See Ichthyosis.

Keratosis Diffusa seu **Epidermica.** See Ichthyosis congenita.

Keratosis Follicularis. This is a rare affection of the skin to which especial attention has of late been given. It is probably the same as was described by Guilbout by the name of *acné sebacée cornée*, and by Lesser as *ichthyosis follicularis*. The French have named it *psorospermose folliculaire végétante*, but as this title was given it by Darier and Thibault in 1889, under the idea that it was due to psorosperms, which have been shown to be only degenerate epithelium, and as Morrow[2] had already reported a case in 1886, with the title of keratosis follicularis, and White[3] another in 1889, under the same title, it seems to me best to retain their title.

Symptoms. The disease affects nearly the whole cutaneous surface, though in both Morrow's and White's cases the palms and soles were free. The eruption begins as pinhead-sized papules, which are firm and of the color of the skin. As they increase in size they become hyperæmic; still growing, they become hemispherical or flattened, with smooth or polished, dense adherent coverings of nail-like consistence, and varying in color from dull red to purplish, dusky red, brown, and brownish black. Some of them are excoriated by scratching and bear hemorrhagic crusts. These lesions are discrete, and the skin about them normal. They are located in the hair follicles. In places the lesions

[1] Brit. Journ. Dermat., 1895, vii., 37.
[2] Journ. Cutan. and Ven. Dis., 1886, iv., 257.
[3] Journ. Cutan. and Gen.-Urin. Dis., 1889, vii., 201.

run together and form elevated areas with uneven surfaces and covered by thick yellowish or brownish, flattened horny concretions; or there may be brownish or blackish plates. The patches feel rough and somewhat greasy. Here and there will be found papillomatous excrescences; or enormously dilated follicular openings filled with comedo-like, firm, slightly projecting concretions forming hemispherical elevations, which when expressed are found to be hard and perfectly dry, leaving the follicle mouth patulous. The nails are coarse, slightly thickened, and ragged at their free edges. Boeck[1] says that they are often the seat of a marked hyperkeratosis without a trace of the disease itself anywhere in their neighborhood. The hard palate in White's case showed some follicular elevations. Pruritus is marked in some cases. A fetid odor is given off from the patient.

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[1] Arch. f. Dermat. u. Syph., 1891, xxiii., 857.

sixth year, though most cases occur before the twenty-fifth year. Males are more often affected than females.

PATHOLOGY. J. T. Bowen, who made a careful examination of White's first case, says that "the disease is a keratosis of the epithelial lining of the mouths of the follicles, which, by extension downward, gradually produces pouch-like depressions in the corium. The capacity for corneous metamorphosis is so great that the central portion becomes a firm horn, which by production of horny matter from below is gradually pushed out above the surface of the skin. There was no proof that the sebaceous glands were affected by the horny change." The keratosis may occur outside of the mouths of the follicles. Robinson found in Morrow's case that the changes occurred principally in the sebaceous glands.

DIAGNOSIS. The disease differs from *pityriasis rubra pilaris* in lacking the constant and early involvement of the palms and soles; in the isolated papules pierced by hairs on the dorsum of the fingers; in the extensive, diffused, scaly dermatitis of the face, neck, and other parts; and in having horny plugs.

TREATMENT. The proper treatment is yet undetermined. It might be well to try the methods found useful in ichthyosis. It is always a very obstinate disease, relapsing after the skin manifestations have been removed.

Keratosis Palmaris et Plantaris. This is a form of congenital or acquired callositas. It has also been called keratoma palmare et plantare hereditarium, ichthyosis palmaris et plantaris, tylosis palmæ et plantæ. It is characterized by the appearance upon the palms and soles of masses of thickened skin of leathery consistence and yellow or brown color. They come without apparent cause, and usually show a symmetrical arrangement. The palms or the soles alone may be affected, but it is always both palms or both soles that are affected. There is sometimes a zone of redness about the thickened plates. Sometimes the whole palm or sole is covered, sometimes the horny masses occur in islands. The plates may be shed periodically, only to re-form. The surface of the plates may be

smooth or uneven. Hyperidrosis is frequently marked. The nails at times show hypertrophic changes. Pain may be complained of when the hands or feet are used. If the feet are affected, the pain may be so great as to prevent walking.

One form of the disease is due to the prolonged ingestion of arsenic. It occurs in a number of isolated points over the palms and soles.

Etiology. The disease is hereditary in many instances, and like ichthyosis tends to affect only one sex in the family. We do not know its cause, and we class it as a tropho-neurosis. It sometimes has been noted to follow the prolonged ingestion of arsenic.

Treatment. The plates may be removed by salicylic acid plaster or ointment, ten to twenty per cent. strength. The same end is reached by poultices, the wearing of rubber sheeting, and the application of various plasters. A permanent cure can hardly be expected.

Keratosis Pigmentosa. See Verruca senilis.

Keratosis Pilaris. Synonyms: Lichen pilaris; Pityriasis pilaris; Ichthyosis seu hyperkeratosis follicularis; Cacotrophia folliculorum; (Fr.) Xérodermie pilaire, Ichthyose ansérine des scrofuleux.

Symptoms. As its name indicates, this is a disorder of cornification. It is characterized by a heaping up of the corneous cells about the mouths of the hair follicles in the form of small conical, whitish or grayish elevations. Between them the texture of the skin is normal; its color may be unchanged or rosy, or of a grayish or brownish shade. It occurs chiefly upon the extensor surfaces of the limbs, especially upon the upper arm and thigh, but may occur anywhere. The appearance of the affected part resembles cutis anserina, being dotted over with pinhead- to small-pea-sized papules, each one of which is either pierced by a hair or has a black dot at its summit indicating the mouth of the hair follicle. The papules are often scaly. The hair is either normal, broken off, or only to be found by opening the papule, when it will be seen curled up inside of it. The skin feels dry and harsh. There may

be slight pruritus. Pityriasis capitis may be present at the same time. As the disease is attended by but slight, if any, subjective symptoms it is often overlooked. It is a chronic affection in most cases.

Brocq describes a keratosis pilaris of the face beginning as minute scaly papules about the hairs, which crowd together to form patches and give a rosy or red tint to the skin. After a time the disease seems to destroy the follicle, and we find depressed scars arranged in rows or scattered about on the red patch. This bears some resemblance to lupus erythematosus, and is the ulerythema ophryogenes of Taenzer. Besnier describes a somewhat similar condition as occurring upon the extremities.

ETIOLOGY. The disease is sometimes congenital and often forms a part of ichthyosis. It is most common in women, and those who do not bathe frequently, or in whom there is cutaneous inactivity or a peculiarly coarse quality of skin.

DIAGNOSIS. It differs from *cutis anserina* in being a permanent condition; from the *miliary papular syphilide* in being whitish, grayish, or blackish, and not dark-red or raw-ham color, and in being removable by soap and water. *Lichen scrofulosorum* occurs in strumous subjects and in well-marked circular or crescentic patches, which is foreign to keratosis. *Papular eczema* differs in being very itchy, and in having red inflammatory lesions. *Ichthyosis* is a general affection of congenital origin, has peculiar markings of the skin, and is not limited to the hair follicles.

TREATMENT. The vigorous use of green soap and water in an alkaline bath, followed by oil or vaseline, will remove the evidences of the disease. Vapor or Russian baths may be used for the same purpose. Hyde prefers general cool baths containing one-quarter of a pound of common salt to each gallon of water, after taking which the skin is to be rubbed with a coarse towel or flesh-brush. As the affection is allied to ichthyosis, it may be treated on the same plan, a new course of bathing being taken with each relapse.

Keratosis Senilis. See Verruca senilis.

Kerion. Synonyms: Trichomykosis capillitii; Tinea kerion; Kerion Celsi.

Symptoms. This is a more or less chronic inflammation of the scalp or beard that most often is a form of ringworm, but may be produced quite independently of that disease. It is most commonly seen on the scalp. The affected part becomes red, œdematous, swollen, and boggy, and may assume a purplish color. Its surface is glazed, uneven, and studded with a number of yellowish suppurating points, or with foramina out of which oozes a sticky, viscid, gelatinous, transparent fluid. Sometimes suppuration may occur attended with a sero-purulent discharge. The swelling is round or oval in shape, and varies in size; it may be but one or two inches in diameter, or as large as a turkey's egg. The pustules form about the hair in the early stage; later the hairs fall and the discharge takes place from the openings of the hair follicles. If the tumor is opened, a thick, viscid material escapes. If the disease occurs with ringworm, the hair will be broken off. Permanent baldness may result if the inflammation is intense. There are more or less pain and tenderness, and at times itching and burning. The posterior cervical glands may be enlarged.

Etiology. The disease is comparatively rare. It occurs chiefly in children of poor constitution. It is most commonly due to the trichophyton fungus passing deep down into the hair follicles, but may be caused by the application of irritants to the scalp, or follow eczema, favus, or sycosis of that part.

Diagnosis. Kerion must be diagnosed from an abscess, a papilloma, a gumma, and a sebaceous cyst. An *abscess* is not preceded by ringworm, has no history of an irritant applied to the scalp, and may arise without any antecedent disease of the scalp; it is more painful; it is often accompanied by a sensation of throbbing, by chilliness, fever, and general malaise; when fully formed there is fluctuation, and when opened it gives exit to pus. These symptoms are not met with in kerion. A *papilloma* is non-inflammatory, firm to the touch, and is unaccompanied by a discharge. A *gumma* is usually accompanied

by other signs of syphilis, and tends to break down and ulcerate. A *sebaceous cyst* is slow in its growth, the skin over it is normal, there is no discharge, and when opened it gives vent to a cheesy mass. A *fatty tumor* is a chronic, elastic, freely movable swelling, with normal skin over it.

TREATMENT. In treating a case epilation should be performed in order to save the hair and give exit to the discharge. If some irritant application is the cause, that should be discontinued, and hot-water dressings, antiseptic solutions, or mild emollient applications employed. If the cause is ringworm, the remedies proper for that disease should at once be used. What they are will be found under Trichophytosis capitis.

Kleienflechte. See Chromophytosis.

Kohlenbeule. See Carbuncle.

Kopskurv. See Favus.

Knollenkrebs. See Keloid.

Kratze. See Scabies.

Kraurosis Vulvæ is a name proposed by Breisky[1] for a form of atrophy of the skin of the external genitals of women, which may occur at any age. The disease has its seat in the vestibule, the labia minora with the frenulum and præputium clitoridis, the inner surfaces of the labia majora up to the posterior commissure, and the contiguous skin of the perineum. It gives rise to the appearance of a defect in the development of the normal folds of the vulva. At times the labia minora and the præputium clitoridis are apparently wanting. The affected skin is white and dry, the epidermis is often thickened, and telangiectasic vessels are visible. Stenosis of the vulvar entrance may result, and thus obstruction be offered both to coitus and parturition. The cause is obscure; possibly a long-continued blennorrhœa, or a congenital defect, or a process analogous to leucoplakia buccalis. Treatment is of no effect.[2]

[1] Zeitschrift f. Heilkunde, 1885.
[2] Janovsky: Monatshefte f. prakt. Dermat., 1888, vii., 951.

Krebs is the German for cancer.

Kupferfinne. See Rosacea.

Kupferrose. See Rosacea.

Kupfriges Gesicht. See Rosacea.

Kwe-na. A disease occurring in Burmah and said to be the same as Yaws.

Läusesucht. See Pediculosis.

Leberflecken. See Chloasma.

Leichdorn. See Clavus.

Leiomyoma Cutis. See Myoma.

Lentigo. Synonyms: Ephelides; (Ger.) Sommersprossen, Linsenflecke; Freckles.

Freckles are properly a species of chloasma. They occur as light to dark brown or even black macules, and are usually located upon exposed parts, especially the face and back of the hands, but they may occur anywhere. In size they vary from that of a pinhead to that of a split pea. They give rise to no subjective symptoms. They usually do not appear before the eighth year of life, but congenital cases have been reported. The latter should rather be classed among the pigmentary nævi. A division is sometimes made between those which are permanent and occur upon unexposed places and those which occur in summer to disappear in winter. To the former the name *lentigo* is given, and to the latter *ephelides*. The distinction is not worth preserving. As old age is approached freckles no longer form, and the old ones are apt to disappear.

Etiology. The cause of freckles is probably an inborn peculiarity of the skin. It has been advanced as a theory of their production that they are due to the chemical action of the sun's rays upon the blood. Blondes are more prone to them than are brunettes. Many people never freckle. Symptomatically they occur as part of atrophoderma pigmentosum.

Pathology. Freckles are but circumscribed deposits

of pigment. Cohn[1] has endeavored to show that lentigines differ from ephelides in being discrete, slightly elevated, and having their pigment in all the layers of the epidermis, as well as in the cutis, and in being associated with changes in the blood vessels of the cutis; while ephelides are crowded together, their pigment is only in the basal layer of the epidermis, and there are no changes in the blood vessels.

TREATMENT. The treatment of freckles is the same as that of chloasma. The only prevention is to protect the skin from the action of the sunlight by wearing veils or by the use of some lotion containing a pigment, such as calamine lotion. Hardaway recommends the following:

℞	Hydrarg. ammon., Bismuthi subnitrat.,	āā ℥j;	āā 4	
	Ungt. aq. rosæ,	ad ℥j;	ad 30	M.

He speaks highly also of electrolysis for the removal of very black freckles. Bulkley recommends the following:

℞	Hydrarg. bichlor.,	gr. vj;	4	
	Acid. acetic. dil.,	℥ij;	6	
	Ac. boric.,	gr. xl;	2	
	Aquæ rosæ,	ad ℥iv;	ad 100	M.

This is to be used night and morning, at first gently, but afterward to be well rubbed in.

There is hardly any use in endeavoring to cure freckles occurring from the action of the sun, as they depart of themselves.

Lentigo Maligna. See Atrophoderma pigmentosum.

Leontiasis. See Leprosy.

Lepothrix. This is a condition of the hairs of the axillæ and scrotum which presents itself as diffuse or nodular incrustation of the hair, which is composed of a parasitic growth. The hairs are not diseased, but simply form a ground for the growth of the parasite. It is met with in those who sweat freely. Sometimes the masses

[1] Monatshefte f. prakt. Dermat., 1891, xii., 119.

...ed. They may be removed with soap and water, and prevented by the use of a mild antiparasitic lotion.

...Synonyms: Elephantiasis Graecorum; Leontiasis; Satyriasis; Lepra Arabum; (Fr.) La Lèpre; (Ger.) Der Aussatz; (Norweg.) Spedalskhed; Leprosy.

A chronic, infectious, constitutional disease due to infection by a specific bacillus; characterized by anæsthesia, erythematous patches, tubercles, ulcerations, atrophies, and deformities according to the structures most affected; and ending in death. (Fig. 42.)

Symptoms. It is usual to describe three forms of leprosy—the tubercular, the anæsthetic, and the mixed. This is convenient for clinical purposes, though not absolutely correct, as even in the nearly pure tubercular form there is more or less anæsthesia. All forms exist in all endemic regions, but now one and now another form predominates. The tubercular form is the one most common in cold countries, the anæsthetic in hot countries. Morrow,[1] however, found that in the Sandwich Islands the tubercular form constituted one-half of the cases, while the anæsthetic form formed but one-third of them.

Tubercular leprosy. Sometimes this form appears suddenly, without prodromata, but usually for days, weeks, or months before the disease frankly declares itself the patient is out of health. He feels indefinitely ill, depressed, and listless; he has dyspepsia and diarrhœa; he is weak, chilly, and suffers from profuse sweating. There may be nose-bleed. Then a remittent fever of malarial type appears. This fever may occur without the other prodromata, and may occur with each new outbreak of tubercles. After a time an erythematous eruption appears upon the face, ears, the forearms, and thighs. It consists of purplish or mahogany-red, slightly raised, hyperæsthetic, smooth, shiny patches, of one or several inches in diameter, usually of oval form. The eruption may fade entirely away, to appear again with a fresh outbreak of fever. After some three to six months of the exanthem the tubercles appear, either upon the sites of the previous lesions, or quite in-

[1] New York Med. Journ., 1889, I., 85.

dependently of them. They begin as pinhead-sized pink papules that enlarge to split-pea- or even to hen's-egg-sized, yellowish-brown tubercles. If a number of these

FIG. 42.

Tubercular and anæsthe

run together, large infiltrated patch
lar shape and nodular surface. T
also arise by an increased deposit of

[1] From a photograph kindly loaned me by
New York.

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FIG. 42.

Tubercular and anæsthetic leprosy.[1]

run together, large infiltrated patches are formed of irregular shape and nodular surface. Then infiltrations may also arise by an increased deposit of leprous material in

[1] From a photograph kindly loaned me by Dr. P. A. Morrow, of New York.

the macules, for the macules themselves are formed of leprous material, and are not simply erythematous lesions. Sometimes the infiltrated patches that arise from the macules may assume ring shapes, by clearing up in their centers. The tubercles are completely anæsthetic. They may come anywhere, but are most commonly seen in the eyebrows, lobes of the ears, the face generally, and upon the extremities. They are rare on the glans penis, palms, and soles. The scalp is said never to be affected. The mucous membranes of the mouth, nose, larynx, trachea, uterus, and vagina are also involved, as may be the conjunctivæ. The tubercles may undergo spontaneous involution in one place, while fresh outbreaks of them occur in other places. Or they may soften and break down and form leprous ulcers, which are indolent, sharply defined, and glazed over with a mucous discharge of peculiar odor. These may attain enormous dimensions, becoming serpiginous and phagedænic. When these ulcers go deep, as they may do on the lower extremities especially, there may take place spontaneous amputation of the fingers, toes, or whole members. This is one form of mutilating leprosy, which is most frequently encountered in the anæsthetic form of the disease. Or the tubercles may, on disappearing, leave atrophic spots. Their development and involution are always slow. The appearance of a well-developed case is striking. The face is deformed by the tubercles, and assumes the "leonine" expression on account of the thickening of the eyebrows causing them to protrude, so that the eyes are sunken and have a stern expression. The hair is wanting in the eyebrows. The immense lobes of the ears hang down. The lips protrude and are often everted. Tubercles stud the face. The forearms are enlarged and knobby. The hands are deformed. There is very commonly a discharge from the nose, a disagreeable odor from the mouth, and the sense of smell is lost. The eyesight is often lost; the voice is cracked and croaking. The lymphatic glands are often swollen. Happily, both in men and women sterility is the rule. There are commonly atrophy of the testicles and loss of sexual power in men. The disease is steadily progressive, and death occurs

in eight years on an average, though the disease may last for many years. Crocker says forty per cent. die of the disease itself, forty per cent. die from renal or lung complications, and the rest from diarrhœa, anæmia, or general marasmus.

Anæsthetic leprosy announces its onset not by febrile symptoms, but by shooting, lancinating pains in the chief

FIG. 43.

Macular leprosy.

nerve-trunks, as the ulnar, median, peroneal, and saphenous. There are also pain and tenderness in various places, and a state of general hyperæsthesia. Itching is regarded by Morrow as being one of the most common and characteristic prodromata of this form of leprosy. There may also be symptoms of general malaise and digestive disturb-

ances. A frequent early symptom is a vesicular or bullous eruption upon the fingers and toes, with at first serous, then purulent contents. These may burst and leave a white, shining, anæsthetic spot, or an ulceration that heals with an anæsthetic cicatrix. Numbness soon follows the hyperæsthetic state. The patient cannot grasp things firmly, and the consequent unskilfulness of his action may be the first thing to attract his attention. This shows muscular weakness as well as numbness.

After some months of these prodromal symptoms an eruption of macules similar to those of the tubercular variety appears upon the extremities, face, and back. They are isolated, of oval shape, hardly raised above the surface, and of a pale-yellow to reddish-brown color. These often enlarge peripherally and clear up or become atrophic in the center. Sometimes, instead of being oval, they will take the form of wide streaks or of gyrate figures. They are often hyperæsthetic when newly formed, but always perfectly anæsthetic when they have become atrophic, and even before that in cases that have lasted some little time. The large nerve-trunks, as that of the ulnar, are at first hyperæsthetic, but later are anæsthetic and can be felt like a whip-cord, and rolled about under the finger without giving rise to pain. Anæsthetic areas will be found independently of the macules, and in old cases a rather general anæsthesia develops, so that the patient may burn himself without noticing it. The anæsthetic areas are subject to change from time to time. Solitary bullæ appear from time to time, as well as urticaria-like lesions. Marked atrophy of the muscles of the hands and feet occurs, and paralysis of the extensor muscles of the second and third phalangeal joints. Wasted interossei muscles and permanent flexion of the last phalanges of the fingers give as characteristic an expression to the hand in this form of leprosy as the tubercles do to the facial expression of the tubercular form. After some ten years or so, during which the greater part of the cutaneous surfaces may have become studded over with white, wrinkled, hairless, atrophic spots, the permanent stage is reached. During these years painless amputation of many of the joints may have oc-

curred by a process of dry gangrene (Lepra mutilans). Erysipelas may occur. The nails and hair are shed. Sleeplessness may prove a distressing symptom. Loss of sexual power and sterility are manifest late in the disease. There is marked anæsthesia of the soft palate, uvula, and pharynx. This form lasts much longer than the tubercular form, fifteen years being an average duration. Sometimes a fair degree of health is preserved for a much greater length of time. In most all cases more or less hebetude of mind is marked, becoming more pronounced with the duration of the disease.

The *mixed form* is a combination of the symptoms of the two former varieties, and perhaps is the one most commonly met with in this country. Indeed, it is the rule that all tubercular cases present certain symptoms of the anæsthetic form, and *vice versa*, the variety being named from the prevailing lesion.

Etiology. Up to within a few years various agencies were regarded as causes of leprosy, such as residence by the seashore, eating of putrid fish, heredity; but in the light of our present knowledge there is but one cause, and that is contagion. The limits of this book forbid full discussion of this interesting topic, but an incontrovertible argument for this view is found in the spread of the disease in the Sandwich Islands, where, within a few years after its introduction, it decimated the community. The contagiousness of the disease is a strong plea for the segregation of the lepers within our own country.

Leprosy is seen in both sexes, though the male sex is more often affected. It is rare in children, and is never seen in infants; a strong argument against heredity. Its incubation stage is very long, reaching over a period of years. It occurs in all countries and climates, but is endemic in certain regions. It seems that a damp, cold climate, or a hot, moist climate favors the disease. Sporadic cases have been reported, but careful investigation would doubtless show that they had been exposed to contagion. Vaccination has been a carrier of contagion.

Pathology. Constantly accumulating evidence points to the *bacillus lepræ* as the disease carrier. This has been

found in the tubercles, the infiltrations, the lymphatic glands, nerves, spleen, liver, walls of the blood vessels, hair follicles, and sebaceous glands. It was discovered by Hansen in 1874, and since then has been studied by many pathologists. "This bacillus occurs as straight or very slightly curved rods, $\frac{1}{5000}$ of an inch in length, which may have knob-shaped expansions at their ends or in their length, due to the presence of two to five spores." (Crocker.) Culture-experiments have for the most part failed, and inoculation-experiments have resulted negatively.

Diagnosis. In a fully developed case little difficulty in diagnosis can arise. Sometimes lepra will need to be differentiated from erythema multiforme; syphilis; lupus; morphœa; and vitiligo. The presence of anæsthesia in any doubtful case will establish the diagnosis of leprosy. Besides this, *erythema* runs a more acute course; *syphilis* of the tubercular form presents redder tubercles, which ulcerate more readily, are grouped, and a history of syphilis is usually attainable; the *lupous* tubercles are small, of apple-jelly color, soft, do not produce thickening of the eyebrows and nodular lobulation of the ears, and group themselves in patches in which cicatricial tissue will be found; *morphœa* has a lardaceous appearance with a violaceous border; *vitiligo* patches are more lead-white and sharply defined, while the skin is unaltered in texture and normal in sensation.

Treatment. The best chance for recovery from leprosy is removal to a region where the disease is not endemic. This, with attention to hygiene, and a general tonic treatment, will do a great deal toward a cure. Of internal remedies, chaulmoogra oil holds the first rank, with an initial dose of three minims three times a day, and then gradually increased to as high a dose as the patient will stand. Nausea, vomiting, and diarrhœa show when this is reached. G. H. Fox[1] has cured one patient by giving nux vomica or strychnine up to full constitutional effects, and then administering chaulmoogra oil continuously. Gurjun oil is also highly commended in an emulsion of one part

[1] Post-Graduate, 1885-6, i., 143.

of the oil and three parts of lime-water, of which the dose is half an ounce morning and night.

Unna claims to have cured one case with sulpho-ichthyolate of sodium, from six to forty-five grains a day, but others who have tried it have not had the same success. Salicylate of soda, thirty grains every four hours till two drachms are taken; salol in full doses; thymol, forty-five to sixty grains a day; carbolic acid up to fifteen grains a day, are advocated by Lutz, Besnier, and others. The general health of the patient should receive attention, and symptoms treated as they arise. H. R. Crocker[1] has had good results in one case by weekly and then semi-weekly hypodermic injections of one-fifth of a grain of calomel.

Externally the chaulmoogra or gurjun oil may be rubbed in. The ulcers are to be treated upon the usual surgical principles. Unna[2] recommends rubbing into all the lesions but those on the hands and face the following:

℞	Chrysarobin., Ichthyol.,	ʒiss;	āā 5	
	Ac. salicyl.,	gr. xl;	2	
	Ungt. simpl.,	ad ℥iv;	ad 100	M.

On the face and hands he substituted pyrogallol for the chrysarobin. To counteract the bad effects of the drugs he administers thirty drops of dilute hydrochloric acid during the day. For women and children he substitutes resorcin for the chrysarobin. To old nodes, after protecting the surrounding skin, he applies during five to seven days a plaster mull containing twenty to forty parts of salicylic acid and forty parts of creosote.

The so-called Bhau Daji treatment[3] is said to have produced remarkable effects in from six to eight weeks after it was begun. It consists in the use of the oil of hydnocarpus inebrians, of which from ♏10 to ʒss is taken in the morning in boiled milk. The patient is also anointed with the oil. Two hours afterward the oil is washed off in a warm bath. He is anointed on going to bed. He is

[1] Lancet, 1896, ii., 364.
[2] Journ. Cutan. and Gen.-Urin. Dis., 1887, v., 381.
[3] Brit. Journ. Dermat., 1893, v., 203.

not allowed to eat pork, beef, or fish, nor to drink alcoholics, tea, or coffee. He is fed on milk, fruit, vegetables, butter, eggs, mutton, and fowls. Roake[1] advocates excision of the tubercles, followed by the application of pure carbolic acid. The thermo- and electro-cautery may be used to the same end. Segregation is the only preventive measure.

Prognosis. The prognosis is bad, as the disease steadily progresses to a fatal termination unless the patient can be removed from the endemic region. If he can be removed, there is a chance of staying the disease. In some instances the disease, even when the patient does not change his residence, pauses in its course for a long time; but eventually it will again become active.

Lepra Alphos. See Psoriasis.

Lepra Arabum. See Elephantiasis.

Lepre Vulgaire. See Psoriasis.

Leprosy. See Lepra.

Leucasmus. See Leucoderma.

Leucoderma. Synonyms: Vitiligo; Leucasmus; Leucopathia; Achroma; Piebald skin.

An acquired loss of pigment of the skin characterized by the formation of symmetrical white patches with convex borders surrounded by an area of hyper-pigmentation.

Symptoms. This is an acquired anomaly of pigmentation, the opposite to chloasma. It is akin to albinismus, only that the latter is a congenital condition. It consists in the disappearance of the pigment of the skin in circumscribed round or oval patches so that white areas are formed. (Fig. 44.) At the same time there is an accumulation of pigment around the areas, so that there is at once a process of apigmentation and of hyper-pigmentation. The size of the patches varies greatly. They may be no larger than a ten-cent piece or of immense size. The disease most commonly begins upon the neck, face, or backs of the hands, but may begin anywhere. It is chronic. It may progress so as eventually to involve nearly the whole body; or it

[1] Brit. Med. Journ., 1888, i., 1214.

may become stationary; or, in rare cases, the skin may become pigmented again. It is a symmetrical disease in

FIG. 44.

Leucoderma. (After HYDE.)

nearly all cases. The general health is unaffected, and there is no change in the sensibility of the patches. In

some cases the white parts are unusually sensitive to exposure to the sun. When the scalp or hairy regions are affected the hair turns white. The disease is most evident in the summer on account of the increased pigmentation that normally occurs in the sound skin at this season.

Etiology. The cause of the disease is obscure. All we can now say is that it is probably a disturbance of innervation. It is uncommon for it to occur before the tenth year of life, though it may do so. Adults are most frequently affected. Both sexes are subject to it. It is more common in the warm than in the cold countries, and is particularly common in negroes. Exposure to the sun and cold seems to be an excitant in some cases. It has followed typhoid fever, scarlatina, and malarial fever. Wood[1] says that when mulattoes contract syphilis they become several shades lighter all over the body. Symptomatically it is seen with morphœa, Addison's disease, and alopecia areata. There is also a syphilitic leucoderma. I have had one case in a man of eighteen years, who began to smoke tobacco when he was six years of age, and had continued to do so. He seemed to be in the best of health.

Diagnosis. There is little difficulty in diagnosis, as there is no other disease in which the only symptom is a loss of pigment with surrounding pigmentation. In *morphœa* the patch may be raised, and the skin is changed in texture, and there is apt to be a lilac ring about it. In *chloasma* the patch itself is dark with a convex border, while in leucoderma the border of the pigmentation is concave. The concave border of the pigmentation will also distinguish the disease from *chromophytosis*, which too is scaly. The normal sensation of the patches distinguishes them from *leprosy*, in which the patches are anæsthetic.

Treatment. Unfortunately there is hardly anything that can be done in the way of treatment. Galvanism or faradism may be tried, and nerve tonics given. We must content ourselves with making the patches less evident by removing the pigment from about them by the means given under Chloasma. Or we can stain the patches so

[1] Jour. Cutan. and Ven. Dis., 1883, i., 274.

that they shall be less white, as by the use of walnut juice. Besnier and Doyon believe that they have cured cases in young subjects by the prolonged use of bromide of potassium internally, and saline or bromo-iodide baths externally, with or without injections of pilocarpine.

Leucokeratose. See Leucoplakia.

Leucopathia. See Leucoderma.

Leucopathia Unguium, or Leuconychia. This affection consists in the appearance of white spots in the nail, which originate in the lunula, and gradually approach the free end of the nail as it grows forward. Sometimes these take the form of stripes or lines. Rarely the whole nail is affected. The nail-substance is otherwise unaltered. The spots are thought to be due to air-spaces in the nail-substance. M. L. Heidingsfeld[1] believes that they are due to a disturbance in the growth, development, or keratinization of the matrix cells in their change to nail-structure. Why these occur we do not know. Possibly there may be a process of fatty degeneration of the nerve-cells and subsequent absorption of the fat. (Taylor.) Or they may be caused by pressing back the nail-fold. They are common in the young, and coincident with white spots in the teeth. (Hutchinson.) They very often are noticed after fevers or other lowered conditions of health. Nothing can be done for this deformity except caring for the general health of the patient and stopping any bad habit.

Leucoplakia. This is an affection of the mucous membrane of the tongue, lips, inside of the cheeks, and vulva, that has been described under the names psoriasis buccalis, ichthyosis linguæ, leucokeratosis buccalis, and tylosis linguæ. It occurs in the form of ivory-white or bluish-white, glistening, irregularly shaped patches upon the mucous membranes that may be a little elevated. To the touch and tongue they feel rough. They may give rise to no discomfort, or they may interfere with chewing and speaking. They may be fissured or papillomatous. There is sometimes salivation. They are caused by smoking, or occur in

[1] Journ. Cutan. and Gen.-Urin. Dis., 1900, xv., 490.

syphilis, psoriasis, lithæmia, stomachic or intestinal catarrh, diabetes, and disturbed nervous influences. Sometimes they arise without assignable cause.

Diagnosis. Leucoplakia differs from *mucous patches* in its more chronic course and slight tendency to ulceration. *Lichen planus*, when occurring in the mouth, resembles the disease very strongly, but takes the form of rings, festoons, and disks, and the typical lichen papules can be found on the skin.

Treatment. It is very essential that tobacco be given up if the patient has been in the habit of using it. It is also necessary to address remedies to the cure or relief of any lithæmic or digestive disorder; and to have the teeth put and kept in good order. An antisyphilitic treatment may be tried, but is of doubtful value. Sometimes a patch may be removed by the daily application of pure lactic acid; or one-half per cent. solution of bichloride of mercury; or ten to thirty per cent. solution of salicylic acid; or one per cent. of chromic acid; or two to ten per cent. of bichromate of potash; or by galvano- or actual cautery. S. Sherwell has had good success with the acid nitrate of mercury. Great care must be had in its use, the surrounding parts being isolated by means of absorbent cotton, and an alkali held ready to neutralize any of the acid that has gone beyond the intended part, as well as to apply to the cauterized surface after a few moments. It is a very painful procedure. Hyde advocates the use of the dental burr after the injection of cocaine.

Prognosis. It is a very obstinate disease. Patches not infrequently take on a cancerous change.

Lichen Annularis. This affection is described by James Galloway[1] as occurring as small nodules in the neighborhood of the knuckles of the hands. The lesions form circular or crescentic patches that have a pale, ivory-like, elevated border raised from one to two millimeters. They are smooth and appear like deep-seated infiltration of the cutis. Inside of the border the lens shows that the normal wrinkles of the skin are partially obliterated. The disease

[1] Brit. Journ. Dermat., 1899, xi., 221.

advances at first slowly and then more rapidly. It is thought to be caused by some toxin, possibly that of gout. It is curable by tonics internally, and two to ten per cent. salicylic acid externally.

Lichen Circinatus. See Seborrhœa.

Lichen Moniliformis. See Lichen planus.

Lichen Pilaris. This term is usually used as a synonym of keratosis pilaris. But Crocker describes it as a separate disease, the lichen spinulosus of Devergie.

SYMPTOMS. It develops acutely or subacutely in crops. It consists in an eruption of pinhead-sized, red, conical papules, in the center of which is a horny spine projecting about one-sixteenth of an inch. These spines can be picked out, and leave a depression in the papule. After a time the redness subsides and the papule becomes the color of the skin. The papules are crowded together in patches, which are round or large and irregular in outline. They occur in few or many regions and are symmetrically distributed. The face, upper parts of chest, hands, and feet are usually exempt. They give a nutmeg-grater sensation to the hand when passed over the patches. There is little or no itching.

ETIOLOGY. Children are the chief subjects of the disease, boys more often than girls.

DIAGNOSIS. It differs from *keratosis pilaris* in its spines, its inflammatory redness, acuteness of outbreak, and its patchy character.

TREATMENT. Alkaline baths and linimentum, saponis well rubbed in will cure the disease. If there is much inflammation, it is best to rub in oil instead of the soap liniment.

Lichen Planus. A chronic disease of the skin characterized by the eruption of smooth, waxy, angular, umbilicated, red papules, that tend to form scaly, lilac-colored, elevated and infiltrated patches specially upon the flexor surfaces of the wrists and the inside of the knees.

While the testimony from skilled observers is overwhelming that lichen planus papules may occur with lichen

ruber, and while some cases of lichen ruber have developed after and together with lichen planus, still we see so many cases of the latter occurring by itself that it merits a special description. In this country and in England lichen planus is far more frequent than is lichen ruber, and is regarded as a separate disease. While the latter occurred but 62 times in 309,406 cases, the former occurred 918 times in the same number of cases, according to the statistics of the American Dermatological Association for 1897.

FIG. 45.

Lichen planus. (Fox.[1])

SYMPTOMS. The disease begins as an eruption of small purplish- or crimson-red, angular, flat, slightly raised papules, varying in size from one-sixteenth to one-sixth of an inch in diameter. A horny plug is sometimes seen in the center of a papule protruding more or less above the surface of the skin. When found it is regarded by some observers as a marked characteristic of the disease. The surface of the papules is smooth and shiny, "waxy-looking," and they have a small depression in the center. When fully developed the papules have on them either gray striations, or the whole papule is gray excepting a rosy edge. This grayness is characteristic. The papules

[1] G. H. Fox: The Skin Diseases of Children. New York, 1897.

may remain discrete, and be disseminated over a larger or smaller area; or they may arrange themselves in rows, or aggregate themselves into patches, the single papules disappearing. The single papules are not scaly, the patches are slightly so. The patches may be small, and if so there is apt to be a well-marked depression in their center, and their shape is round or oval. The larger patches have no definite shape nor depression, but are well defined and elevated. Characteristic single papules will be found

FIG. 46.

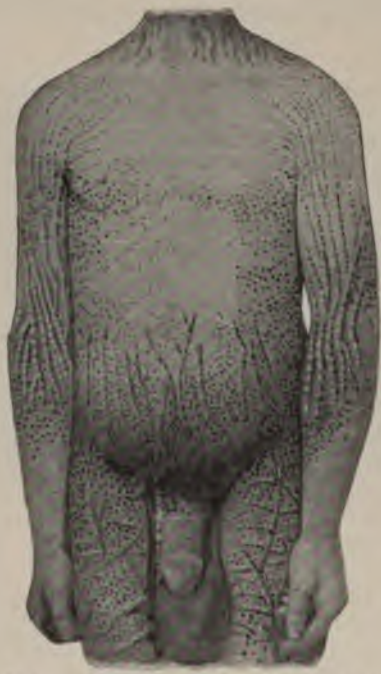
Lichen planus. (Fox.)

scattered about in the neighborhood of the patches. The color of the patches is characteristic, and may be defined as lilac. It is an important aid in diagnosis. Both the papules and patches on disappearing leave behind pigmented, slightly atrophic spots, which, after a time, fade away. It is still a moot-point as to whether the individual papule enlarges peripherally or not. Like those of psoriasis, the papules of lichen planus may appear upon scratched surfaces.

The disease is most often met with upon the anterior surface of the wrists and forearms, and upon the inside of

the knees, the former being the favorite location. But it may occur anywhere, other favorite locations being the flanks, lower part of the abdomen, and the calves, and it may involve a large part of the body, though it rarely becomes general. The mucous membranes of the lips and mouth are affected, and the disease then appears as white

FIG. 47.



Lichen ruber moniliformis. (After TAYLOR.)

spots difficult if not impossible of diagnosis without the occurrence of the typical eruption on the integument. The involvement of the mucous membranes is rarely reported. It is probably more common than is supposed, because the mouth is seldom inspected, as the lesions give rise to no discomfort. As a rule, there is more or less

symmetry shown in the disposition of the efflorescences; and pruritus, which sometimes is marked. The general health is often unaffected, but, on the other hand, many of the subjects of the disease are not in perfect condition when the disease begins, and not a few others become greatly broken down on account of the loss of sleep and continual discomfort caused by the pruritus. The course of this disease is chronic, and new outbreaks are liable to occur. True relapses usually do not occur when the disease is once cured.

Kaposi[1] has described a unique form of this disease under the name of *lichen ruber moniliformis*, in which the typical lesions became transformed into keloidal nodes arranged in lines. (Fig. 47.) The nodes were in some places as large as cherries with their bases confluent and their upper parts separated by furrows. The cases of this sort that I have seen in this country occurred in what were rather lichen ruber acuminatus or pityriasis rubra pilaris. Unna[2] describes what he names *lichen obtusus*, a form of papule midway between the acuminate and the plane. They are large and waxy, discrete, often convex papules, frequently bluish-white, not scaly, and but slightly itchy. A *lichen verrucosus* and a *lichen hypertrophicus* have also been described. Hallopeau and others have reported cases in which angular flat papules of white color occur, under the name of *lichen planus atrophicus*, seu *sclerosus*, seu *morphœicus*. It is met with on the upper part of the chest and arms. White papules are seen in colored races. *Lichen planus striatus* occurs as a long band, usually upon the inside of the thigh, sometimes extending the entire length of the limb. Pemphigoid eruptions occasionally occur as part of the disease. Crocker, who at one time described an infantile form of the disease in which the papules come out acutely in groups, acuminate at first, but soon becoming flat, angular, and red, changing to purple, now regards it as merely a miliaria rubra.

Etiology. We know no more about the causes of lichen planus than we do about those of lichen ruber. A

[1] Vierteljahr. f. Dermat. u. Syph., 1886, xiii., 571.
[2] St. Petersburg. med. Wochenschr., 1884, i., 447.

neurotic element is marked in many of the cases, and cases have been reported in which the papules were distributed along the course of a nerve.[1] Nervous exhaustion, rheumatic sweating, and checking perspiration are given as causes. Its subjects are mostly adults, many of them otherwise in good health. It is probable that a toxæmia of some sort is the foundation of the disease. It is more frequent in women than in men in this country and in England, though in Austria the reverse obtains.

Pathology. "In the plane form the process appears to be inflammatory, beginning usually round a sweat duct in the upper part of the corium, with subsequent thickening of the rete and enlargement of the papillæ by down growth of the interpapillary processes." (Crocker.) The fact that the mucous membranes are affected is brought forward as an objection to the view that the process begins in the sweat duct. Robinson thinks that the process begins as an inflammation of the papillæ and upper part of the corium. The form of the papule is determined by the shape of the so-called "skin fields."

Diagnosis. An eruption of flat, shiny, angular, umbilicated papules of a lilac color showing grayish striations situated on the anterior surfaces of the wrists can be nothing but lichen planus. These same characteristics are diagnostic anywhere on the body, and sufficient to distinguish the disease from eczema and psoriasis. Moreover, *eczema* will show a tendency to moisture, or the papules will undergo change; and *psoriasis* will be almost sure to have characteristic patches upon the elbows and knees, covered with more abundant white and ofttimes thick scales. *Syphilis* sometimes bears a strong resemblance to lichen planus, but itching is less marked, its eruption is more polymorphous, and its color is more that of raw ham.

Treatment. In the treatment of lichen planus, nerve tonics or sedatives and attention to the general health as well as to the hygiene both of the body and mind, are our most reliable agents. Arsenic is useful in some cases. Morris speaks highly of biniodide of mercury in the initial dose of one-tenth of a grain, which is to be gradually in-

[1] Mackenzie: Brit. Med. Journ., 1884, ii., 1077.

creased. Antipyrine, phenacetine, and the spinal douche render good service. Alkaline diuretics sometimes do well, as the acetate of potash. Boeck and R. W. Taylor speak well of fifteen-grain doses of chlorate of potash fifteen minutes after eating, followed in a quarter of an hour by twenty drops of dilute nitric acid in a wineglassful of water. In obstinate cases change of scene in travel often cures when other measures fail. Locally stimulants, such as tar, pyrogallol, and chrysarobin, will prove serviceable. Unna's ointment, as given under lichen ruber acuminatus, is widely used. Touching the papules with pure carbolic acid may be tried. In acute cases alkaline lotions will allay irritation. Thymol and naphtol may be tried as in lichen acuminatus. In chronic cases Hardaway recommends:

℞	Saponis olivæ præp.,	℥iv;	100	
	Olei rusci, Glycerini,	āā ℥j;	āā 25	
	Ol. rosmarini,	℥iss;	4	
	Alcoholis,	ad ℥viij;	ad 200	M.

well rubbed in with a piece of flannel. The patches are sometimes favorably affected by mercurial plaster. Some cases in which the skin is very irritable are best treated by means of prolonged simple or medicated emollient baths. Jacquet and other French dermatologists report excellent results from the use of spinal douches of water of varying temperature and force.

PROGNOSIS. The prognosis is generally favorable, though the disease is often very obstinate.

Lichen Polymorphe Chronique. See Prurigo.

Lichen Ruber Acuminatus. Though it is many years since Hebra first described this disease, dermatologists are still undecided as to many of its essential features, such as whether lichen planus is but a form of lichen ruber acuminatus, or a disease *sui generis;* and as to whether the separate lesion of lichen ruber increases peripherally or not. In this country the acuminate form of the disease is very rare, only fifty-two cases having been reported to

the American Dermatological Association for sixteen years out of a total of 204,866. While in Europe lichen planus is considered as only a form of lichen ruber, in this country and in England it is regarded by probably the majority of the dermatologists as a separate disease, and will be described as such in this book. On account of the diversity in the descriptions of lichen ruber, the one here given is taken from Hebra and Kaposi.[1]

Lichen ruber, or *lichen ruber acuminatus*, is a chronic progressive disease of the skin marked by an eruption of small, red, conical papules tipped with a scale. These tend to run together and form lines, or diffused, red, scaly, infiltrated patches.

Symptoms. The disease begins as a discrete eruption of millet-seed-sized, slightly scaly papules, that cause but little itching, and therefore are accompanied by but few excoriations. The papules may be bright or brownish red, conical, hard, covered with an adherent, dry, white scale, and imparting, when they are present in a sufficient number, a rough feeling to the touch. Or they may be pale red, waxy, smooth, rounded, and with a small angular depression in their center. The first outbreak may be scattered about the whole trunk and extremities, though somewhat more abundant on the flexor surfaces of the latter. Or it may be limited for a long time to a single region, such as the leg or genitals. After a time the eruption becomes general by the appearance of new papules either at the periphery of the first patch, or between the original papules, or irregularly over all. The single papules never increase in size during their whole course. After a time the papules crowd together, and melt into each other and form continuous, red, infiltrated patches of various sizes and shapes, whose surfaces are like shagreen leather or covered with scales.

This is the most common course. Sometimes, however, the new papules appear in manifold circular rows about the older ones. The older ones sink in, disappear, and leave a darkly pigmented depression. The thus formed patches are usually on the extremities.

[1] Lehrbuch der Hautkrankheiten, 1872.

In a fully developed case the skin is everywhere reddened, scaly, and thickened, and the movements of the joints are greatly interfered with, so that they are held in a semi-flexed position. The thickening of the skin is specially marked on the palms, soles, fingers, and toes, and here rhagades are prone to form. The nails are thickened, uneven, brittle, broken, opaque, yellowish-brown; or they are represented only by thin horny plates. The coarse hair of the head, axillæ, and pubes is unaffected. Kaposi, in the third edition of his book, says that a defluvium capillorum takes place.

The subjective symptoms are itching and a gradual progressive interference with nutrition. At first the patient may feel quite well, but when the whole body is affected he falls into a general marasmus, and at last dies from the effects of the disease.

So far Hebra. Subsequent observers have reported the occurrence of a bullous eruption in the course of the disease.

ETIOLOGY. The cause of the disease is obscure. It affects all ages and conditions, but is most frequent in the male sex—about two-thirds of the cases. By many the disease is considered to be a neurosis.

DIAGNOSIS. The disease must be differentiated from psoriasis, eczema, pityriasis rubra, pityriasis rubra pilaris, and lichen planus. From *psoriasis* it differs, when in the early stages, in that its papules do not enlarge into the large, characteristic psoriatic papules and patches; in the later stages there are less scaling than in psoriasis universalis, and more thickening of the skin; and the palms and soles are far more profoundly diseased. From *eczema* it differs in that its papules neither undergo involution nor change into vesicles. Moreover, it does not itch so much, and there is never any moisture. From *pityriasis rubra* it differs in the greater thickening of the skin, and in its scaling, which is not in the form of thin plates or furfuraceous desquamation. From *pityriasis rubra pilaris* it is said to differ in being less scaly, in affecting the flexor surfaces by preference, in the darker color of the eruption from the first, in being more itchy, and in the profound

constitutional disturbance. Nevertheless the opinion is gaining ground that the two diseases are identical. From *lichen planus* it differs in that it does not have its favorite locations upon the flexor surface of the wrist and inside of the knees, in having conical and not flattened papules, in not forming lilac-colored angular patches, and in a more frequent general involvement of the skin.

TREATMENT. Arsenic, by the mouth or hypodermically, is the drug upon which most reliance is placed for the cure of this disease. The drug must be pushed up to its limit of toleration, and given continuously for a long time, and for some weeks after the disappearance of the eruption. The hypodermic method is very painful. The external treatment is by means of tar, if not too irritating; or we may simply address ourselves to the relief of the itching by means of carbolic acid, one or two drachms to the pint of olive oil or pound of vaseline. Crocker speaks well of thymol or naphtol, gr. x to ʒij to the ounce of vaseline. Unna's[1] treatment has proved serviceable in many hands. He keeps the patient in bed between woollen blankets, and has him rubbed every morning and night with the following:

℞	Ungt. zinci oxid. benzoat.,	℥iv;	500	
	Ac. carbolici,	℈iv;	20	
	Hydrarg. bichlor.,	gr. ij–iv;	0.5–1	M.

For the ointment of oxide of zinc, diachylon ointment may be substituted; or a mixture of oil, lime-water, and white bole may be used instead. Where the corneous layer is very thick, two drachms and a half of chalk may be substituted for the bole.

PROGNOSIS. The course of the disease is essentially chronic. Even when a cure is effected, relapses are liable to occur. Hebra at first said that all cases were fatal, but the use of arsenic and increased experience in the treatment of the disease have greatly modified his gloomy prognosis.

Lichen Scrofulosorum or Scrofulosus. A disease of the

[1] Monatshefte f. prakt. Dermat., 1892, i., 5.

skin occurring in strumous subjects, consisting in an eruption of small pale papules that tend to group in round or half-moon-shaped figures upon the abdomen, sides of the chest, and flanks. It is one of the so-called tuberculides.

SYMPTOMS. It occurs in the form of pin-point- to pin-head-sized, grouped, conical papules, which may be of the color of the skin, or pale red or fawn-colored. These papules occur around the hair follicles and form small round groups, or circles or segments of circles, upon the abdomen, sides of the chest, flanks, and neck in adults; and upon the extremities in children. They are somewhat scaly, but give rise to no inconvenience, so that they are often overlooked. In some cases the papules are so numerous that the groups lose their distinctive shape, and large surfaces are covered, giving the skin a dirty-brown color. Many disseminated and discrete papules are scattered over the body outside of the patches. Acne pustules may form; and a brown pigmentation of the face has been observed in some cases. The papules finally undergo absorption, desquamate, and leave transitory yellowish pigmentation. The disease runs a chronic, slow course. Eczema may complicate matters. Keratosis pilaris is frequently well marked upon the limbs.

ETIOLOGY. The great majority of the subjects of this disease present evidences of scrofula. A few are robust. Some are phthisical, especially the children. The disease is most common in childhood, and is very uncommon after the twenty-fifth year of life. It is thought by many authorities to be a tubercular disease, due to the toxins of tuberculosis. Tubercle bacilli are not found in the papules.

DIAGNOSIS. The disease must be differentiated from papular eczema, the papular syphilide, lichen ruber, a punctate psoriasis, and keratosis pilaris. *Eczema* differs from it in greater itching, in the brightness and rapid development of the papules, and in its tendency to vesiculation or moisture. The papular *syphilide* is of darker red color, much larger, and more polymorphous; the patient's age is usually greater, and the history and course of the eruption will soon decide the diagnosis. *Lichen*

ruber has darker papules, which do not group in circles and segments of circles; they itch, and tend to involve the whole surface. The patients are more often adults, and there is a profound constitutional disturbance. *Psoriasis* itches, is abundantly scaly, and its papules soon enlarge and form characteristic patches. *Keratosis pilaris* affects the extensor surfaces of the limbs by preference, each papule is plainly about a hair, and the papules do not group. A curled-up hair will often be found in the center of the papule.

TREATMENT. The persistent use of cod-liver oil both internally and externally will cure the disease. The syrup of the iodide of iron or the iodide of starch may be given with the oil. Good hygiene and food are valuable adjuncts. For the cod-liver oil, which is disagreeable for external use, other oils, such as cocoa-butter, may be used; or vaseline with or without oil of cade. Crocker recommends the addition of liq. plumb. subacetatis, ♏ xv, or thymol, five grains to the ounce of vaseline. The disease tends to get well of itself.

Lichen Simplex. See Papular eczema.

Lichen Spinulosus. See Lichen pilaris.

Lichen Tropicus. See Miliaria.

Lichen Urticatus. See Urticaria.

Lineæ Albicantes. See Atrophoderma.

Linsenflecken. See Lentigo.

Liodermia Essentialis. See Atrophoderma pigmentosum.

Lipoma is a fatty tumor.

Liver Spot. See Chloasma.

Lombardian Leprosy. See Pellagra.

Lousiness. See Pediculosis.

Lues. See Syphilis.

Lupoid Acne. See Acne frontalis and Lupus miliaris.

Lupus Erythematosus. Synonyms: Seborrhœa congestiva; Lupus superficialis; Lupus sebaceus; Lupus erythematodes; Scrofulide erythemateuse, or Erythème centrifuge (Fr.); Dermatitis glandularis erythematosa (Morison); Ulerythema (Unna).

This is a chronic disease of the skin, occurring in variously sized, slightly elevated, scaly, red patches which show a strong tendency to the production of atrophic scars.

Symptoms. There are two varieties commonly described, namely, the circumscribed or discoid, and the diffuse, or disseminated, or aggregated. To these some of the English writers add a third, the telangiectic.

The *circumscribed* or *discoid form* is the one most often met with. It occurs generally on the face, specially upon the sides of the nose and the cheeks, the scalp, and the ears; more rarely upon the hands and feet; and still more rarely on other parts of the body. It begins by the appearance of several isolated or grouped red spots slightly elevated, of pinhead to split-pea size, with a thin adherent scale upon them. Some of these spots may be depressed in the center. When the scale is removed there will be found upon its under side a delicate projection formed by a plug of sebaceous matter that dipped down into the mouth of the sebaceous gland. The mouth of the gland will be found patulous. These spots increase in size by peripheral extension to form disc-shaped figures of varying size; neighboring ones will coalesce, and thus patches will be formed, also covered with the fine grayish or white adherent scales. Now when the scale is raised a number of the characteristic prolongations will be found on its lower side. The margins of the patches are slightly raised, but the middle parts undergo involution, are lower than the margins, and after a time are apt to become cicatricial, the skin being atrophied. The scar-tissue thus formed is thin, delicate, and white, never puckered or deforming.

The color of the patches is red, but of a peculiar hue that is characteristic, and perhaps can be best defined as violaceous. There is never any moisture connected with the disease. Burning or itching may or may not be present. The patches are of indefinite duration—months or

years. At times they disappear of themselves, and do not leave scars, but the rule is that scars are left. The extent of the disease varies greatly, as well as the shape of the patches. The greater part of the face may be involved, or there may be only a single patch. Usually the eruption is symmetrical. A characteristic location for the disease is upon the back and sides of the nose and the contiguous parts of the cheeks, forming what has been fancifully called a butterfly, the ridge of the nose representing the back of the animal, and the cheeks its wings. Sometimes gyrate figures are formed. The mucous membranes and the vermilion border of the lips may be affected, presenting patches with punctate excoriations of red color, or spotted with grayish masses of exudation and superficial cicatrices. Occurring upon the scalp it leads to permanent loss of hair from well-defined patches, and the same may be said of it as it occurs on other hairy parts. The disease may become stationary after a time. Relapses are liable to occur. The general health is unaffected.

The *diffuse* or *disseminate form* is a more acute process, and exceedingly rare in this country. In it the patches may appear suddenly or slowly develop. They are from pinhead to finger-nail size, slightly elevated, reddish brown, hyperæmic, and hard; they pale under pressure, and are attended with heat and burning. In this stage they resemble an urticaria or the papular stage of eczema. There may be from twenty to a hundred or more of them crowded together upon the face and scattered over the body. Many of them may disappear in a few days without leaving any trace, while others will remain and become characteristic patches of lupus erythematosus with depressed cicatrices. The individual lesions do not increase in size, and the patches are formed by aggregations of single lesions. The eruption may be accompanied by a high degree of inflammation, exudation, and crusting, or even by bullæ. There may be deep, painful subcutaneous tumors in the joints and glands at first, over which characteristic patches will f[illegible] In some acute cases the development of the patches [illegible]panied by fever, osteocopic pains, and nocturnal [illegible]s, and in some cases the patient will pass into a

typhoid condition and die of some lung complication. Or there may be a persistent inflammation of the face, erysipelas perstans, which may lead through a typhoid state to death. There may also be swelling of the parotid glands and of various lymphatic glands. In some cases the disease bears a close resemblance to chilblain.

The *telangiectic form* occurs, according to Crocker, as a persistent circumscribed redness, which close inspection shows to be due to dilated vessels, and is commonly located symmetrically upon the cheeks. Upon pinching up the skin it will be found to be markedly thickened. Some few comedones may be present. There is no desquamation.

Etiology. About two-thirds of the cases occur in women. It seldom occurs before puberty, though Kaposi has seen a case in a child of three years. Beyond these facts we know but little of its etiology. The French regard it as a scrofulous affection which, in the light of modern pathology, is regarded as tubercular. While nothing suggesting its relation to a tuberculous process has ever been found in the skin, still, as not a few patients show other symptoms of a general tuberculosis, such as swollen or broken-down glands in the neck or cicatrices from the same, or give a history of tuberculosis in other members of their family, there is a growing opinion that the disease is a species of tuberculosis of the skin due to the toxins of that disease. Crocker suggests a feeble circulation and prolonged exposure to great cold or heat as possible causes. It has been seen to follow upon frostbite and sunburn. It would also seem that those who are subjects of seborrhœa are predisposed to the disease.

Pathology. In spite of much careful study the exact pathology of the disease is still undetermined. J. A. Fordyce and O. H. Holder[1] believe that the process is due to embolism of the small arteries, arising either on account of an alteration in the blood due to a toxin, or to some change in the walls of the vessels, or to a thrombus brought from some distant part. In the majority of cases the earliest manifestations of the disease are capillary obstruction and then an infiltration of round cells in the middle

[1] Med. Rec., 1900, lviii., 41.

of the lower zone of the corium, the sebaceous glands and hair follicles being secondarily involved. The cicatricial scarring is the result of atrophic processes. Robinson[1] regards the disease as a local infectious process, a granuloma, inflammatory in character. This view is held also by Schoonheid.[2]

Diagnosis. The disease must be differentiated from lupus vulgaris, eczema, rosacea, psoriasis, and syphilis. A typical case occurring upon the face in the form of red patches, with fine cicatrices in the center, and covered with a delicate white or grayish adherent scale, from the under side of which are a number of projections, offers no difficulty in diagnosis. *Lupus vulgaris* differs from lupus erythematosus in occurring before puberty, in showing no disposition to symmetry, in the presence of apple-jelly tubercles, in being a deep-seated disease, and in leading to far more disfiguring cicatrices. *Eczema* never leaves scars, is prone to exudation, itches, its scales do not show prolongations from the under side, and its patches undergo more rapid and varied changes. *Psoriasis* will be pretty sure to show characteristic patches covered with thick scales, and never causes scarring or leads to permanent loss of hair. *Rosacea* is largely composed of dilated blood vessels, occupies the middle third of the face, often presents superficial pustules, does not leave scars, and is subject to frequent exacerbations. In *syphilis* a history of other lesions will be obtainable, there will be more evident infiltration, and the course of the lesions will be more rapid. The disseminate form of the disease is very difficult of diagnosis at first, but as soon as characteristic patches form the difficulty is removed.

When lupus erythematosus occurs upon the scalp it causes a bald spot that may be mistaken for *alopecia areata*, but differs from it in its irregular shape, in the signs of inflammation in it, and in the cicatricial condition of the scalp it leaves. A microscopical examination of the hairs from about a patch will decide as between lupus erythematosus and *favus* or *ringworm*.

[1] Trans. Amer. Dermat. Assoc., 1898.
[2] Arch. f. Dermat. u. Syph., 1900, liv., 163.

TREATMENT. Little beyond the care of the general condition of the patient upon general principles can be done for lupus erythematosus in the way of internal medication. McCall Anderson advocates the use of iodide of starch, made by triturating twenty-four grains of iodine with a little water, and gradually adding one ounce of starch, rubbing them well together until the mass becomes deep blue in color. Of this a heaped teaspoonful, increased gradually, may be given three times a day in water or gruel. Iodide of potassium is also commended, as are phosphorus and salicylate of soda.

Sometimes in the early stages alkaline washes, such as lotions of zinc or lead, may be used. Or one composed of

℞	Zinci sulphat., Potassii sulphurat.,	āā ʒj;	āā 3	
	Alcohol.,	ʒiij;	10	
	Aquæ rosæ,	ad ℥iv;	ad 100	M.

as in acnea and rosacea. Green soap or prepared olive soap, or its tincture, may be used in more chronic cases. This is often serviceable for the disease as it attacks the eyelids. The affected parts are to be well rubbed with it, using a piece of flannel. The process is to be repeated every few days. If the reaction is too great, a little oil or a glycerin lotion may be applied. Crocker advocates the addition of one or two drachms of the oil of cade to the ounce of the tincture of green soap. Carbolic acid, pure, applied to the patches, often acts admirably. It turns them white at first. The application is to be repeated as soon as the crust falls. Fowler's solution ʒj in distilled water ℥j, and spirits of chloroform two drops, applied externally in the morning and evening, is sometimes efficacious. Resorcin, fifty per cent. aqueous solution, applied once or twice a day until decided reaction takes place, and then cold cream or calamine lotion used until the reaction subsides, is a good plan of treatment. The resorcin solution must be repeated when the reaction has subsided. Pyrogallic acid, ten per cent. in ointment, sometimes does well. N. Walker thinks that oxidized pyrogallol, one to two per cent. in acetone collodion, is the best means we

have; while others consider a combination of ten per cent. pyrogallol with forty per cent. of salicylic acid in collodion is better than anything else. Chloracetic acid; oil of cade; solution of naphtol, one per cent.; resorcin, three to ten per cent. strength in solution or ointment; tincture of iodine or iodide of glycerin; caustic potash, one part to six or twelve of water, have their advocates. Hydronaphtol plaster, resorcin plasters of ten to twenty per cent. strength, and mercurial plaster are often excellent when persisted in. Sulphur or ichthyol in ointment or paste does well in some cases. Thilanin sometimes does well. H. Hebra has introduced the method of sopping the patches every fifteen minutes with pure alcohol containing four per cent. of menthol. The phototherapy of Finsen has done well in some cases. It must be used as described under lupus vulgaris. Liquid air acts like a caustic in these cases. All cases should be carefully watched that the reaction from our remedies does not go too far. If the remedy produces too much reaction, it must be stopped, a mild zinc lotion applied until the irritation subsides, and then the remedy is to be used again.

If these superficial caustics do not cure, resort may be had to linear scarifications, making a series of cross-hatchings, taking care not to go very deep. The bleeding is to be checked by pressure and the application of carbolic acid, two drachms to the ounce. Limited surfaces must be taken at a time. Electrolysis by means of multiple punctures will sometimes give brilliant results. Sometimes running the needle across the patch, making a number of parallel insertions, will have a good effect. Erasion with a curette, galvano- or Paquelin cautery, and strong escharotics, such as the acid nitrate of mercury, may have to be used in very obstinate cases, but not till all other means are exhausted, as they are apt to leave deep scars.

Prognosis. The prognosis should be guarded, as the disease is a most obstinate one, and prone to relapses. A cure may, however, be effected by patient perseverance. It is wise always to tell our patients that scars are liable to be left, not only by the treatment employed, but by the disease itself. An accidental attack of facial erysipelas

cured one case under my observation. The discoid form has little effect upon the health of the patient, but the disseminated variety not infrequently ends fatally.

Lupus Exedens. See Lupus vulgaris. This term is sometimes applied by surgeons to epithelioma.

Lupus Exfoliativus, seu **Exulcerans,** seu **Hypertrophicus.** See Lupus vulgaris.

Lupus Miliaris or **Lupoid** or **Adenoid Acne.** See Acne necrotica.

Lupus Pernio. This disease affects the uncovered parts, hands, face, and specially the ears, nose, and upper lip. It is ill defined, and extends over large surfaces. It is marked by cyanosis, telangiectasis, infiltration of the skin, diffuse tumefaction, fissuring of the skin, and superficial vesiculation. Slight ulcerations form that become covered with crusts and last a long time. The old patches are studded with irregular cicatrices. It is a chronic disease with no subjective symptoms. It occurs in lymphatic subjects, and is distinct from the other varieties of lupus.[1]

Lupus Sclerosus. See Tuberculosis verrucosa cutis.

Lupus Sebaceus, seu **Superficialis.** See Lupus erythematosus.

Lupus Tuberculosus, seu **Verrucosus,** seu **Vorax.** See Lupus vulgaris.

Lupus Vulgaris. Synonyms: Besides those given above, which merely describe certain stages or forms of the disease, and are quite unnecessary to be remembered, we have: Noli me tangere; Herpes esthiomènes; (Fr.) Dartre rongeante, Scrofulide tuberculeuse, Esthiomène; (Ger.) Fressende Flechte.

This is a chronic neoplastic disease of the skin due to its invasion by the tubercle bacillus, and characterized by one or more brownish-red papules, tubercles, or infiltrated patches, that tend either to absorption or ulceration, and always leave scars.

[1] Tenneson: Atlas de Musée de l'hôpital St. Louis, p. 135.

Symptoms. Lupus vulgaris usually begins in childhood and upon the face; the cheek and nose being the parts most usually affected. The initial lesion is a dark-red or brown pin-point- to pinhead-sized papule, which may be on a level with the skin, depressed below, or raised above it. There may be but a single papule, but usually there are a few of them either grouped or scattered. After a time slightly scaly patches will form by the coalescence of the lesions which have enlarged, into brownish-red, semi-translucent, smooth, shiny tubercles, or by the development of new lesions between the old ones. The shape of the patches is irregular. Rarely they are ring-shaped. The size of the patches varies greatly, but they are always elevated above the surface of the skin, of a dark-red color, and studded with the little brownish-red papules, or so-called tubercles. The appearance of these tubercles has been likened by Hutchinson to that of apple-jelly. There may be but one patch, or the whole face may be more or less covered with a number of them. Symmetry is not a feature of the disease, often only one side of the face being affected. Sometimes two or more patches will coalesce at their borders, their centers will fade out, or rather become atrophic, and a gyrate patch will form, creeping over the skin with a well-marked, elevated, dark-red border. The center of all the patches is lower than the border, and eventually is atrophic. The course of the disease is slow and chronic, and the fate of the patches varies greatly. For months or years they may remain absolutely quiet, and then show signs of activity by new lesions appearing about the edges of the patches or in the scar-tissue. The patches may entirely disappear, leaving a fine, smooth cicatrix; this is rare without treatment. Or they may break down and form ulcers, which are irregularly rounded, shallow, with easily bleeding floors, and a moderate amount of purulent secretion that dries into a crust. This is the so-called lupus exulcerans, and is not very frequent in this country according to my experience. Sometimes upon this ulcerated surface papillary or warty growths will spring up, the so-called *lupus papillomatosus* or *verrucosus*. Sometimes the infiltration of the patch is unusually great, and

then we have *lupus hypertrophicus.* Most commonly we have a non-ulcerated, exceedingly chronic infiltrated patch with areas of cicatricial tissue scattered through it. When the disease attacks the end of the nose, it will cause it to shrink up and convert it into cicatricial tissue. When the ear is diseased, it also shrinks up so as to be half the size it was originally. These changes are due either to ulceration or to the gradual absorption of the lupus tubercles that they all undergo.

While the face is the site of predilection of lupus, it may also occur upon any part of the skin of the body, as well as upon the mucous membranes. In this latter situation it is most often secondary to the disease elsewhere; still it is often primary. Thus Bender[1] found that $30\frac{3}{10}$ per cent. of all his lupus cases began in the nasal mucous membrane. Pontoppidan also found the origin of the disease to be the nasal mucous membrane in many cases. In the nose it frequently leads to perforation of the septum, and sometimes causes great deformity of the nose, but it does not attack the bones. All other mucous membranes may be attacked, the rectum and vagina being least often affected. Upon mucous membranes we do not see the same tubercles as on the skin, but papillary excrescences which form patches. They may be absorbed or ulcerate. The conjunctivæ may be involved primarily or secondarily. Epithelial cancer has developed in very rare instances upon the lupoid tissue itself, more commonly upon the scar tissue left by the lupus. Whenever it develops as a sequela of lupus its course is more rapid and its prognosis far more grave than is usually the case. Erysipelas is a not infrequent complication of lupus, and is sometimes curative in its action. Lupus of the extremities is often followed by permanent deformities and disabilities, and sometimes by tubercular lymphangitis. Implication of the lymphatic glands is exceptional in lupus, and then only in advanced cases.

Etiology. Lupus has long been regarded as a manifestation of scrofula. It is now demonstrated that it is a tubercular disease. It should be placed under the division

[1] Vierteljahr. f. Derm. u. Syph., 1888, xv., 891.

of Tuberculosis cutis, but usage makes it advisable to consider it by itself. Many patients with lupus are plainly strumous; many, $55\frac{9}{16}$ per cent. of Sach's[1] cases, are either tuberculous themselves or have a decided history of the occurrence of phthisis in their family. The phthisical history is far less pronounced in this country than it is in Europe. It is no uncommon thing for several members of the same family to have lupus. It is probable that we could find a close connection between lupus and infection with the tuberculous virus in all cases, were it practicable to do so. Another evidence of its tubercular origin is found in the nearly uniform reaction of lupus to tuberculin. It is much more frequent in females than in males, about sixty-two per cent. being in females according to Block's and Sach's statistics. It begins in more than half the cases before the fifteenth year. It may begin as early as the second year. It is almost always a disease of youth.

Pathology. The pathology of lupus has been studied by many competent investigators. "It is a neoplasm of the granuloma class, and consists of a small-cell infiltration which begins in the deep part of the corium, and from thence gradually invades all the other skin structures," says Crocker. The tubercle bacillus is found in the tissues, though but sparsely. Inoculations have not always been successful, but in a goodly number of cases the inoculations have been followed by general tuberculosis, so as to warrant our belief in the tubercular nature of the disease. It has been suggested that as the bacilli are present in but a small number, the irritation of the tissues is due to the toxins produced by them.

Diagnosis. Lupus is most commonly confounded with a tubercular or gummous syphilide. It may have to be differentiated from a scrofuloderm originating in a caseous gland, from an epithelioma, lupus erythematosus, and possibly lepra. From *syphilis* it is diagnosticated by the presence of the characteristic apple-jelly tubercles; by its slow course; by its history; by the absence of all other signs of syphilis; by its little tendency to ulceration; by

[1] Vierteljahr. f. Derm. u. Syph., 1888, xiii., 241.

the superficial character of its ulcers and their slight crusting; and by its sparing the bones. If there is still any doubt, appeal may be made to the effect of treatment by means of the iodide of potassium and mercury, which will have no effect upon the lupus. As the *scrofuloderm* is another manifestation of the tubercular diathesis and amenable to the same treatment as that of lupus, its differentiation is not so important. It, however, will begin about a caseous and broken-down lymphatic gland or gumma, will probably have sinuses, and no characteristic tubercles. An *epithelioma* begins usually after the thirty-fifth year; has no tubercles; and forms a deep ulcer with raised, hard, waxy edges crossed with dilated blood vessels. The diagnosis from *lupus erythematosus* is given in the preceding section. *Leprosy* presents large tubercles which are anæsthetic, and this at once decides in its favor.

TREATMENT. As lupus is a tubercular disease, and sometimes is followed by tuberculosis of the lungs, care must be given to the general health of the patient, and he must be placed in the best possible hygienic surroundings. His diet should be nutritious, and cod-liver oil, iodine, and iron should be given. But external treatment is of the greatest importance, and the disease must be gotten rid of root and branch. If a single diseased cell remains, the disease is sure to return. To effect its destruction surgical procedures had best be resorted to. The whole patch or patches may be scraped out with the dermal curette, and this followed by a twenty-five or thirty per cent. pyrogallol ointment for a week or ten days, and that in turn by mercurial plaster for another equal term. The pyrogallol will cause free suppuration and destroy the cells left behind by the curette. A second or third course may be necessary. Piffard prefers to touch the base left after curetting with the galvano-cautery at a red heat. The wound is then to be packed with absorbent cotton. After about ten to fourteen days the crust and cotton will fall off and leave a soft, smooth, pliable cicatrix. Multiple scarifications have proved of great use. They may be made with a many-bladed instrument constructed for the purpose, or with a scalpel, or a knife shaped like a

butcher's cleaver (Fig. 48). They must go deep enough to penetrate all the softened tissue, but not to wound the sound parts. The resistance offered by the healthy tissue

FIG. 48.

Scarifying-knife.

will be sufficient guide for this. The scarifications should be so made as to divide the tissues into little squares, thus :

They may be repeated in five or six days, and need no after-treatment. This is Vidal's method. The individual tubercles may be bored out with Morris's double-screw instrument, or with dental burrs and hooks dipped in pure carbolic acid, as proposed by Dr. George H. Fox. The galvano- or Paquelin cautery may be employed to destroy the disease. This will require the administration of an anæsthetic, while the former procedures do not require it, or at most anything more than local anæsthesia by means of cocaine. Multiple punctures by means of the galvano- or thermo-cautery at somber red-heat at one millimeter distance for small patches and linear scarifications with cautery knife for large ones, followed by emplast. vigo, and repeated once a week, is Besnier's method. Electrolysis in multiple punctures or by passing the needle through the patch or by means of a flat metallic button, is a useful mode of treatment. The current must measure three to five milliampères, and it must be continued for five minutes, when the button is used. Auspitz recommends puncturing the patches in many places with a steel point dipped in carbolic acid. Lang[1] advocates excision of the patches when not too

[1] Dermat. Zeitschrift., 1900, vii., 805.

large, followed by grafting. He has operated in eighty-five cases, fifty-eight of which he was able to follow up. Of these, thirty-nine remained free from relapses.

These surgical procedures have largely superseded the use of caustics, though the latter are valuable and may be used when the patient fears an operation. Arsenic may be employed in the form of a paste, such as Hebra's modification of Cosme's paste:

℞	Ac. arsenios,	gr. x;	2	
	Hydrarg. sulphureti rubri,	ʒj;	12 50	
	Ungt. aq. rosæ,	ad ʒj;	100	M.

which is to be spread on lint or linen, applied evenly, and bound down firmly. It is to be left on for twenty-four hours, then removed and reapplied till ulceration is set up. It is painful. Vienna paste, of equal parts of caustic potash and unslacked lime; or a chloride of zinc paste may be used, such as one part of zinc to three parts of starch. Both are painful. Many think highly of boring into the patch with the solid nitrate of silver stick. Salicylic acid, twenty to twenty-five per cent., in plaster or plaster-muslin, changed once or twice a day is good. It is well to combine creosote with the salicylic acid, two parts to one, to allay the pain caused by the acid. The local application of bichloride of mercury in solution (gr. j to ʒj) to ulcerated forms, and in ointment to non-ulcerated forms, is commended by White and others.

Unna[1] recommends painting with pure carbolic acid for from two to four days. He has also had good results with a salve-muslin containing one per cent. of bichloride of mercury, twenty per cent. of carbolic acid, and thirty-six per cent. of oxide of zinc. He[2] has also recommended the following procedure: Little sticks of hard wood are sharpened and then soaked for several days in a solution of

℞	Hydrarg. bichlor.,	gr. xv;	1	
	Ac. salicylici,	ʒiiss;	10	
	Ætheris sulph.,	ʒvj;	25	
	Ol. olivæ,	ad ʒiij;	ad 100	M.

[1] Monatshefte f. prakt. Dermat., 1891, xii., 341.
[2] Ibid., 1895, xxi., 281.

A stick is forced into each tubercle, cut off close to the skin, and covered with gutta percha or carbolized mercurial plaster. After two days the plaster is removed, leaving a surface covered with a thin layer of pus. The holes made by the sticks are enlarged and the sticks lie loose in them. The sticks are removed, the surface aseptically cleansed, the holes filled with a powder of

℞	Hydrarg. bichlor.,	gr. iss;	0 1	
	Magnes. carbonat.,	ʒiiss;	10	
	Ac. salicylici,	ʒj gr. xv;	5	
	Cocain. muriat.,	gr. viiss;	0 5	M.

which is blown on with a powder-blower and worked in by the fingers or with a wooden spatula. The patch is again covered with the plaster for twenty-four hours, when the procedure is repeated for another day. The subsequent treatment is by pyrogallol.

Neither tuberculin nor tuberculin TR has proved as valuable as it promised. Only very few cases have been reported as cured by it. The inconvenience, depression, and sometimes fatal results from these remedies render them unfit for general use.

The most recent treatments of lupus are by the Roentgen rays and phototherapy. Both these methods require expensive apparatus and are very slow. The latter is known as Finsen's method. Both sunlight and electric light are used concentrated by means of a focussing apparatus upon the patch rendered bloodless by pressure with a convex glass. Each sitting by sunlight lasts two hours, by electric light one hour. The treatment must be repeated daily.

Prognosis. The prognosis should always be guarded. Relapses after any plan are too often seen. A scar must result both from the disease and its treatment. The possibility of the development of a general tuberculosis must also be borne in mind, although many patients preserve throughout the course of the disease a robust state of health.

Lymphangiectasis. Varices of the dermal lymphatics may be superficial or deep; and affect the trunk, the meshes, or the lacunæ, though most commonly all parts

of the vessels are diseased. When they are superficial they form ampullary swellings at the surface of the skin which may be isolated or agglomerated. In size they vary from that of a millet-seed to that of a pea or larger. In color they vary with that of the skin. They break more or less easily and discharge the lymphatic fluid. If deep, they can be more readily felt than seen, or form upon the surface of the skin isolated or associated raised cords which run a more or less tortuous course. After a time these also break and discharge lymph.

Hallopeau and Goupil [1] describe under this title a disease that they believe to be of tubercular origin, and that appears about a bony prominence of the extremities as a diffuse tumefaction or a cushion-like elevation resembling varicose vein tumors. They eventually open and discharge pure lymph or lymph mixed with pus. Fresh tumors arise in the course of the lymphatics in an ascending series; also gummy nodes. The affected limb is swollen, indurated, and of more or less somber red. The prognosis is grave, and the proper treatment undetermined.

Lymphangioma, also called **Lymphangiectasis, Lymphangiectodes, Lupus Lymphaticus**, and **Lymphorrhagica Pachydermia**, is an exceedingly rare disease. It consists, according to Crocker, in a number of minute, deep-seated vesicles, closely crowded together in irregularly outlined groups of from one-third to one-quarter of an inch in size. These groups are arranged irregularly with healthy skin between them, or a few scattered vesicles in the otherwise healthy skin. They are usually confined to a single small area. The vesicles are deep-seated with thick walls, some of them almost warty-looking. They are pin-point to hemp-seed size, colorless or straw-colored, or pinkish, and contain a clear fluid. Some have vascular striæ or tufts over them, others red clots, others contain extravasated blood. They run a chronic, non-inflammatory course, spreading slowly at the periphery, and tending to relapse if removed. Most of the few cases have occurred in males and begun in early childhood.

[1] Ann. de. derm. et de syph., 1890, i., 957.

The disease is of lymphatic origin, and the main feature is dilated lymphatic vessels.

FIG. 49.

Lymphangioma. (EPSTEIN.[1])

The TREATMENT consists in destruction by caustics, excision, or electrolysis; but relapses are liable to occur.

A number of other rare affections of the lymphatics have been named lymphangioma. The present state of our knowledge in regard to them is by no means exact. One variety is named by Kaposi

Lymphangioma Tuberosum Multiplex. This is a still more rare disease than lymphangioma, and consisted, in Kaposi's case, in the appearance all over the trunk and neck of hundreds of lentil-sized, rounded, brownish-red, smooth, glistening, disseminated, flat or elevated tubercles. They were firm and elastic, slightly painful, and upon some of them were dilated blood vessels. One or two other cases of the same kind have been reported by others. By some this disease is regarded as a species of benign cystic epithelioma.

[1] By permission from Journ. Cutan. and Gen.-Urin. Dis., 1892, x., 214.

Lymphoderma Perniciosa. See Mycosis fungoïdes.

Lymphorrhagica Pachydermia. See Lymphangioma.

Lymphosarcoma. See Sarcoma.

Maculæ et Striæ Atrophicæ. See Atrophoderma striatum et maculatum.

Maculæ Cæruleæ. See Pediculosis vestimentorum.

Madura Foot. See Fungous foot of India.

Mal de la Rosa. See Pellagra.

Mal Rosso. See Pellagra.

Maladie des Vagabonds. See Pediculosis.

Malignant Papillary Dermatitis. See Paget's disease.

Malignant Pustule. See Pustula maligna.

Malingering. See Feigned eruptions.

Malleus. See Equinia.

Mamillaris Maligna. See Paget's disease.

Mask. See Chloasma.

Measles. See Morbilli.

Medicinal Eruptions. See Dermatitis medicamentosa.

Melanoderma, seu **Melasma.** See Chloasma.

Melastearrhée. See Chromidrosis.

Melanosarcoma. See Sarcoma.

Melanosis Lenticularis Progressiva. See Atrophoderma pigmentosum.

Melitagra. See Pustular eczema.

Mentagra. See Sycosis.

Miliaria. Synonyms: Sudamina; Lichen tropicus; (Ger.) Frieselausschlag; Prickly heat.

This is a disease of the sweat glands due to excessive sweating, which may or may not be inflammatory, and is characterized by an eruption of discrete papules, vesicles, or pustules. Several varieties are described, but it is

enough to distinguish two forms, namely, sudamina and lichen tropicus.

Symptoms. *Sudamina*, also called miliaria crystallina, is the form that is met with during the course of febrile diseases, and occurs as an eruption of an immense number of small, closely crowded, but discrete, bright, pearly vesicles entirely without inflammation or subjective symptoms. They are most abundant on the trunk, especially upon its anterior plane, but may occur anywhere. After lasting a few days they are absorbed and disappear by drying up, possibly with some scaling, or they may rupture and dry up.

Lichen tropicus is very commonly seen in this country during warm weather. It may consist in an eruption of pin-point, bright-red papules (miliaria papulosa); or of very small vesicles upon an inflamed skin (miliaria rubra); or the eruption may be a composite one of papules interspersed with vesicles and pustules. Whichever form it may assume, the lesions are present in great number, and closely crowded together, though not aggregated. It may involve the whole surface of the body, but is most common on covered parts, and especially upon the trunk. The eruption is apt to become better or worse according to the changes in the temperature of the atmosphere. The disease may last in this way throughout the warm weather. It is no uncommon thing for furuncles to form, and even cutaneous abscesses. Itching, prickling, and burning are always annoying accompaniments. If the skin is much scratched, eczema may complicate the disease. The old nurse's "red gum," the strophulus of older writers, is a miliaria. Kaposi regards the disease as an eczema.

Etiology. The cause of sudamina is retained sweat, owing, probably, to epithelium clogging up the sweat pores when sweating is stopped on account of the fever. When the fever passes and the sweat glands resume their function the rush of sweat to the surface raises up the epithelium over the pores into little vesicles. They soon give way and the trouble is over. Lichen tropicus is due to congestion about the sweat pores and irritation of the skin when profuse sweating is induced by too warm cloth-

ing and hot weather. It is also suggested that checking a profuse sweat may cause it. It is seen most commonly in babies and fat people. It is noticeable in this city (New York) that the children who live near the river front and are a good deal in the salt water escape the disease, while it is very common in the rest of the tenement-house population.

DIAGNOSIS. Sudamina differs from *vesicular eczema* in its sudden occurrence during a febrile process; in being non-inflammatory; in its vesicles not breaking down; and in not itching. Lichen tropicus differs from *eczema* in the minuteness of its papules; its sudden appearance; not forming patches which are moist; having a high atmospheric temperature as an evident etiological factor, and the tingling rather than the itching of the eruption.

TREATMENT. Sudamina needs no treatment, as with the subsidence of the fever it gets well of itself. Lichen tropicus requires attention to the diet, cutting off the meat in children and lessening its amount in adults. Cooling drinks and the administration of gentle saline laxatives are also advisable. Locally, bathing in salt water or alkaline lotions, and subsequent powdering of the skin, conjoined with wearing light clothing, and not using too warm bedcovers, will relieve and ofttimes cure the trouble.

Miliary Fever, or the sweating sickness, is an epidemic disease accompanied by profuse sweating and miliaria. The epidemics have occurred most often in France.

Milium. Synonyms: Grutum; Strophulus albidus; Acne albida; Tuberculum sebaceum.

SYMPTOMS. These are small pinhead- to split-pea-sized, firm, whitish or yellowish, slightly elevated papules that occur usually upon the face. They are spherical in shape, and slowly increase in size up to a certain point, when they remain stationary. When incised and pressed upon laterally a small, white, round, oval, or lobulated mass emerges. They give rise to no subjective sensation. While their most common site is the face below the eyes, they may occur anywhere on the face; and also upon

the hairs of the lips, the penis, and scrotum. In this latter situation they are often [illegible] and [illegible]. Among the [illegible] there are [illegible]. On the genitals [illegible] the part also is the [illegible]. [illegible] of them. [illegible] Wart of [illegible] [illegible] [illegible]

use of green soap or salicylic acid, when the milia will be destroyed.

Milk Crust. See Eczema.

Mitesser. See Comedo.

Mole. See Nævus.

Molluscum Cholestérique. See Xanthoma.

Molluscum Contagiosum. Synonyms: Molluscum epitheliale, seu sebaceum, seu verrucosum, seu sessile; Epithelioma contagiosum; (Fr.) Acné varioliforme, Ecdermoptosis.

FIG. 50.

Molluscum. (After ALLEN.)

SYMPTOMS. This is a contagious disease of the skin that occurs in most cases upon the face and in children,

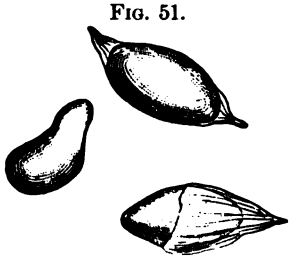
and is characterized by the appearance of one or more rounded pearly white or pinkish discrete tumors, varying in size from that of a pinhead to that of a large pea. (Fig. 50.) These tumors are waxy or opaque, and on top are slightly flattened, and show an umbilication or small depression, out of which the soft cheesy contents of the tumors can be squeezed. These tumors are at first very small, but gradually grow until they attain a certain size, when they may remain unchanged for an indefinite period; or they may become inflamed, break down of themselves, discharge their contents, and disappear either without leaving any trace or with a very slight scar. There are not infrequently scores of these tumors to be found on the same subject. They are commonly sessile, but may become more or less pedunculated. The genitalia, breast, and scalp are affected next to the face in point of frequency, while the tumors may occur anywhere but on the palms and soles.

Etiology. Children are far more often affected than adults. If adults are affected, it will usually be found that they are in attendance upon children who have molluscum. The bad hygienic conditions under which poor people live seem to predispose to the affection, as it is rare to meet with it among the well-to-do. There is little doubt that the disease is contagious. Though inoculation-experiments have failed in most instances, still there have been a few cases in which they were successful. In the spring of 1891 a child with molluscum contagiosum came into my service in Randall's Island Hospital, and within a few weeks, no attempt being made to destroy the tumors, there were six cases in the wards.

Pathology. The true pathological anatomy of these growths has not been settled, but the old idea that they spring from the sebaceous glands is no longer entertained. The rete seems to be the starting-point of the disease. One of the most characteristic features of the disease is the so-called "molluscum corpuscle," which is but a changed epithelial cell. (Fig. 51.) These appear, under the microscope, as large, ovoid, lustrous bodies, without nuclei, some being either wholly or partly contained in an epidermic

envelope, and some being entirely uncovered. Several parasites have been declared to be the cause of the disease by different investigators.

FIG. 51.



Molluscum corpuscles. (After KAPOSI.)

DIAGNOSIS. The appearance of the disease is so characteristic as to be diagnostic. It is most apt to be confused with *milium;* but if it is remembered that a milium has no central depression, while a molluscum has, the confusion will exist no longer. If the lesions are taken for the vesicopustules of *variola*, a scarcely probable occurrence, pricking their tops will at once show that they are not pustules, and if they are watched for a day or so it will be found that they remain unchanged.

TREATMENT. The speediest way of getting rid of the tumors is to scrape them off with a curette. To insure their not returning it is advisable to touch the base of each tumor with a drop of carbolic or stronger acid. Or it is sufficient to make a small slit in the top of the tumor with a scalpel, squeeze out the contents, and touch the base with carbolic acid.

Molluscum Epitheliale. See Molluscum contagiosum.

Molluscum Fibrosum, seu **Pendulum.** See Fibroma.

Molluscum Sebaceum, seu **Verrucosum.** See Molluscum contagiosum.

Monilethrix. See Atrophia pilorum propria.

Morbilli. Synonyms: Rubeola; Measles.

This is one of the contagious exanthemata. Its stage

of incubation is from eight to twenty-one days, usually from ten to twelve days. It is characterized by prodromata of marked catarrhal symptoms, such as conjunctivitis, coryza, and bronchial inflammation, more or less fever, and constitutional disturbance; and then, on about the third day, an eruption of small, red, flat papules that rapidly enlarge, and uniting with others form mulberry-colored little patches often of a crescentic shape, with areas of sound skin between. H. Koplik[1] calls attention to the fact that one or two days before the eruption appears on the skin there will be found on the buccal mucous membrane and on the inside of the lips small, irregular, bright-red spots with a minute bluish speck in the center. The eruption begins on the face and neck, spreading downward, from which it covers the whole body in about a day and a half. The fever begins to decrease on the second day of the eruption. The rash begins to disappear by the third or fourth day, and is gone by the ninth day. Furfuraceous desquamation follows the subsidence of the exanthem. Sometimes it is so slight as to be hardly noticeable, and it is never so marked as in scarlatina.

Diagnosis. The only dermatoses with which measles is apt to be confounded are an erythema, rubeola or German measles, variola, and the macular syphilide. But the catarrhal symptoms; the regular progression of the eruption from above downward; and the crescentic patchy arrangement and dark color of the lesions are sufficient to differentiate it. In *erythema* we may have some constitutional disturbance, but it is of short duration; the eruption is more pronounced on the trunk and extremities, and shows no order of progression; the color of the eruption is a brighter red; there is an absence of crescentic arrangement; and very often an accompanying urethritis will suggest the ingestion of some of the balsams as a cause of the trouble. In *rubeola* there is not so much constitutional disturbance, less catarrhal complications, and a pronounced swelling of the glands of the neck. The eruption is usually a remarkably fine papular one, not so patchy as in measles. *Variola* in its early stage is some-

[1] Arch. Pediat., Dec., 1896.

times difficult to diagnose from measles. Backache is usually a marked symptom in variola; its papules are smaller, harder, and more shot-like, and lack the crescentic arrangement of measles. The subsequent course of the disease is, of course, very different from that of measles. The *erythematous syphilide* affects the sides of the chest and the abdomen more than the face; the rash lasts for weeks after any possible fever has passed; its lesions have no definite arrangement and come out in successive crops, so that at the same time there will be present lesions of different age, and staining of the skin from those that have gone.

TREATMENT is purely symptomatic.

Morbus Elephas. See Elephantiasis.

Morbus Maculosus Werlhofii. See Purpura.

Morbus Pedicularis. See Pediculosis.

Morphœa. See Scleroderma.

Morvan's Disease is a disease of the spinal cord which causes profound cutaneous lesions, such as ulceration, bullæ, and fissures of the palmar side of the hands and fingers, and paronychia and necrosis of several phalanges. It is allied to, if not identical with, syringomyelia, which see.

Morve. See Equinia.

Moth Patch. See Chloasma.

Mother's Mark. See Nævus.

Multiple Fungoid Papillomatous Tumors. See Mycosis fungoïdes.

Myasis Externa Dermatosa is a dermatitis due to the penetration of the skin by certain kinds of flies, which lay their eggs under the skin. These subsequently hatch out and give rise to the dermatitis.

Mycetoma. See Fungous foot of India.

Mycosis Frambœsiodes. See Dermatitis papillaris capillitii.

Mycosis Fungoïdes. Synonyms: Inflammatory fungoid neoplasm; Multiple fungoid papillomatous tumors; Fibroma fungoïdes; Lymphadénie cutanée; Granuloma fungoïdes; Eczema hypertrophicum seu tuberosum; Ulcerative scrofuloderma; Lymphodermia perniciosa; Sarcomatosis generalis; Multiple sarcoma cutis; Fungoid dermatitis; Beerschwamähnliche multiple Papillargeschwülste der Haut.

A chronic progressive disease of the skin, characterized by the appearance with or without an antecedent erythematous or eczematous stage, of fungating tumors that tend to break down and ulcerate. It leads, through marasmus, to death.

Symptoms. The many names that have been applied to this rare disease testify to the uncertainty of our knowledge of its proper place in the classification of skin diseases. It assumes so many forms that it is impossible in our limited space to give a complete picture of the disease. In some cases the first thing noticed is what appears to be a simple eczema, erythema, urticaria, or psoriasis in variously sized patches, tending to be round or circinate in form, and accompanied by marked pruritus. These lesions occur anywhere, and constitute the first stage of the disease. They may disappear for a time, to reappear in the same places or elsewhere. After some months, or two or three years or more, the patches become raised, glistening, and infiltrated, more deeply red, and pea-sized papules form. These disappear, and new ones form. This is the second stage, and may last months or years. Then the characteristic tumors form either by the papules enlarging and coalescing, or as tumors at once rising out of the sound skin, without antecedent erythematous stage. The tumors are oval, hemispherical, annular or irregular in shape, sharply defined, sometimes slightly pedunculated. They are of whitish, bright-red, bluish-red, or dark-red color. They are sometimes hard and elastic, sometimes soft and succulent. The epidermis over them is tense, thin, and glistening. They may be absorbed and disappear, new ones appearing; or they may become necrotic and ulcerate. In size they vary from that of a pea to that of the fist.

At first they occur only on the trunk; later they come anywhere, and involve even the mucous membrane of the mouth. The itching and pain continue well into the tumor-stage, when they lessen. The lymphatic glands enlarge painlessly. The hair falls from over the tumors. The general health of the patient is undisturbed for a long time, but at last a general marasmus sets in and the patient dies, usually from an uncontrollable diarrhœa or some complication on the side of the lungs. There has been but one case of recovery reported.

ETIOLOGY. The majority of the cases have been in men over forty years old. The disease is held not to be contagious by some, while others hold the opposite opinion. Blanc[1] found in one case that there was a marked reduction in the white blood corpuscles, their proportion to the red being 1 to 130, instead of 1 to 350 or 500. This is about all that is known of the etiology of the disease. While much study has been given to the pathology of the affection there is no agreement among pathologists as to its essential nature. By many it is supposed to belong to the class of infecting granuloma.

DIAGNOSIS. The diagnosis of the disease in its early erythematous stage is very difficult, and probably cannot be made with certainty. There is something peculiar in the sharply circumscribed outline, the chronicity, circinate form, and capriciousness of the patches. *Psoriasis* affects other localities at first, its patches are not so infiltrated, and it is more scaly. *Eczema* is a moist disease at some time and more multiform in character. When the tumors develop, and the capricious manner of their coming and going is observed, the diagnosis is more evident.

TREATMENT. Thus far nothing has been found to stay the course of the disease, except that Köbner reports the cure of a case by means of hypodermic injections of arsenic. A general tonic treatment is always indicated. Locally, pyrogallol; ichthyol; mercurial ointment; injections of carbolic acid; resorcin, and camphorated naphtol have been used, and may be tried. The itching is most rebellious to treatment. The tumors, when not in great num-

[1] Journ. Cutan. and Gen.-Urin. Dis., 1888, vi., 256.

bers, may be cut out, though the operation is of doubtful utility. The ulcerations that result from breaking down of the tumors must be treated on surgical principles.

Prognosis. Death is the outcome of the disease, and it may occur in from a few months to fifteen years, the average being from two to four years.

Mycosis Microsporina. See Chromophytosis.

Myoma. Like most of the tumors, so this one concerns the surgeon more than the dermatologist. Two main varieties are described, namely, simple or liomyoma and dartoic. Myomata may be single or multiple. They are composed of muscular fibers, and vary in size from that of a split pea to that of an orange. They are painful on pressure, and sometimes spontaneously. They are pink, red, or normal in color, disseminated or aggregated into patches, though still retaining their individuality. The epidermis over them is unchanged. The single tumors may be sessile or pedunculated, and may attain the size of an orange. The dartoic variety has its seat most often on the female breasts, and on the genitalia of both sexes, and is usually a single tumor. Simple myoma are more commonly multiple, and occur upon the upper extremities, though they may occur anywhere on the body. Most of the cases are in middle-aged or elderly men. If they contain a good deal of fibrous tissue, they are called *fibro-myoma;* if they contain large blood vessels, they form *angio-myoma;* or, if the lymphatics are involved, we have *lymphangio-myoma.* The diagnosis is often difficult without the aid of the microscope. Excision is the only thing that can be done for them.

Myoma Telangiectodes. See Myoma (Angio-myoma).

Myxadenitis Labialis. See Cheilitis glandularis.

Myxœdema. This is a constitutional disease with cutaneous symptoms. The skin becomes waxy pale; yellowish; shining in some places, dull and earthy-looking in others; it is dry, scaly, exfoliating on the extremities, sometimes ulcerated, and verrucose on the lower limbs. The fingers and toes are sometimes livid. There are

partial or general alopecia, and deformity and fragility of the nails. There is a general œdematous swelling of the whole integument as well as of the mucous membranes, and this œdema does not pit on pressure. The swelling is most marked in the face. The skin about the eyes becomes puffed up so as almost to close the eyes. Cushions of fat fill the supraclavicular spaces. There is atrophy of the thyroid gland. The patient's intellectual faculties become dulled, the speech is slow, and the gait unsteady.

The disease affects women far more often than men, and involves all parts of the body. There are an enfeeblement of mind, and a great impairment of the senses of touch, taste, and smell; a torpidity of movement and of the digestive functions. It ends fatally either by marasmus or by complications on the side of the internal organs.

The diagnosis in the early stage is difficult; when fully developed it could hardly be taken for anything else. The cause of the disease is unknown.

TREATMENT. All the symptoms are removed by the use of thyroid extract or powder, improvement being rapid. When the treatment is stopped the patients after a time lapse into their former state, so that the administration of the thyroid has to be more or less continuous.

Nævus. A nævus, strictly speaking, is a congenital mark or growth in the skin, which may be either pigmentary or vascular. The name is occasionally applied to acquired new growths similar to the congenital ones.

Nævus Araneus. See Telangiectasis.

Nævus Lupus. See Angioma serpiginosum.

Nævus Pigmentosus. Synonyms: Nævus spilus; Nævus pilosus; Nævus verrucosus; Nævus lipomatodes; (Ger.) Fleckenmal, Pigmentmal, Linsenmal; Pigmentary mole; Mother's mark.

A congenital, circumscribed hyper-pigmentation of the skin, often accompanied by a growth of coarse hair and hypertrophy of the connective and fatty tissues.

SYMPTOMS. These growths are closely allied to lentigo

and chloasma, as a hypertrophy of pigment is a prominent feature of them. When they consist of pigment only, and are not raised above the surface of the skin, they are called *nævus spilus*. When besides the pigment there is an hypertrophy of the connective tissue, and they are raised and uneven, the name *nævus verrucosus* is applied to them; or *nævus lipomatodes* if they are soft and contain fatty tissue; if hair grows from either form, then we speak of *nævus pilosus*. In color they vary from a light

FIG. 52.

Nævus lipomatodes.

to dark brown or black. In size they vary from that of a split pea to that of an area large enough to cover the whole back. Most commonly they are of small size. They may be located anywhere, though most often on the face, neck, and back. There may be but one or two, or hundreds of them. They may have no special distribution, or they may occur in streaks or bands. They may be unilateral or bilateral, and sometimes symmetrical. If hair is in them, it is coarse and stiff, and generally darker than that

of the head. Sometimes large hairy moles bear a strong resemblance to the fur of animals. They grow in proportion to the growth of the individual, and cease growing when he has attained his growth. They are usually congenital, but may be acquired, and are liable to undergo malignant change in advanced life. They give rise to no subjective symptoms. They are permanent growths. They rarely disappear of themselves.

ETIOLOGY. To account for the appearance of these malformations we have only the theory of nerve-influence, and that is by no means satisfactory. Their popular name of mother's mark shows that the popular superstition agrees with the scientific theory. We can simply regard them as anomalies.

DIAGNOSIS. Moles differ from *lentigo* in being congenital and permanent, and in a hypertrophy of connective tissue and a growth of hair being connected with them. The difference between hairy moles and *hypertrichosis* is in the substratum; in the latter the underlying skin is otherwise normal.

TREATMENT. We can destroy these growths and leave behind but little scar. If there is but a single pigmentary mole, it may be cut out. In this case it will leave a linear scar. It is generally better to destroy the growth by touching it over carefully with nitric or glacial acetic acid. This is done by stippling, as it were, making a row of dots in this fashion—

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.....
.....

Electrolysis by multiple puncture, or by transfixing the mole in various directions, is a sure and speedy way. J. Brault[1] recommends tattooing them with a solution of thirty parts of chloride of zinc and forty parts of sterilized water. The eschar falls in five to ten days. It may be necessary to repeat the process. Hairy moles are best destroyed by electrolysis, as in superfluous hair, only here a coarser needle may be used, as we are not so particular

[1] Ann. de derm. et de syph., 1895, vi., 33.

about a little scarring. The warty growths may be removed by a curette.

Nævus Unius Lateris. See Papilloma lineare.

Nævus Vascularis. Synonyms: Nævus vasculosus seu sanguineus; Angioma (Ger.) Feuermal, Gefassmal; (Fr.) Tache de feu, Tache vasculaire; Port-wine mark; Birth-mark; Claret stain.

Symptoms. These are composed mainly of vascular tissue, and are congenital or appear during the first month of life. They are usually single, but may be multiple. They vary greatly in size, shape, and color, but all possess one feature in common—they pale under pressure. They may be pinhead-sized spots not raised above the surface of the skin; or they may form large, erectile, elevated, pulsating tumors; or they may spread out so as to involve a large area. They may be pink, bright red, dark red, or even purple in color. When on the face they become more pronounced on crying, coughing, and the like. They may disappear spontaneously; increase in size during a few months or years; or, most commonly, remain unchanged. According to their size they have received various names. The small, flat, or scarcely raised nævus composed of capillaries is called *nævus simplex*, or capillary nævus. This is the form very often seen in children. It is not infrequent for it to disappear of itself after a while, leaving either no trace or a delicate atrophic scar. When it is so large as to form a patch as big as the hand or larger, it is called *nævus flammeus*, or *port-wine mark*. The surface of this form is often uneven and studded with small erectile vascular tumors, or, may be, pigmentary moles. It often becomes dark purple after exposure to cold. The large erectile pulsating tumors are called *nævus tuberosus*, *angioma cavernosum*, *venous nævus*. They differ very much from the other forms in appearance and formation. Their surface is uneven and lobulated. This form is apt to increase in size, and may attain enormous dimensions.

Nævi may occur anywhere on the body, but are most frequent on the head and face. They may also occur

upon the mucous membranes primarily or secondarily. The back, nates, pudenda, and lower limbs are said by Crocker to be the most common sites of the cavernous form. All forms of nævi may be hardly perceptible at birth, but become gradually more evident afterward.

ETIOLOGY AND PATHOLOGY. Vascular nævi are probably always congenital malformations, though their appearance upon the skin may be retarded for some time. The simple capillary nævi, which include the port-wine marks, are simply an increase in number and size of the capillaries. In the venous nævi we have also a new growth of connective tissue forming a meshwork, and they are supplied directly by an artery without the interposition of capillaries. Women are more prone to nævi than are men.

DIAGNOSIS. There can be no difficulty in diagnosis, excepting that a nævus may be taken for a *telangiectasis*. This error would be of little consequence, since the latter is simply an acquired nævus, and differs chiefly in having a central red point from which the dilated capillaries radiate.

TREATMENT. Electrolysis is the best means for destroying the vast majority of these growths. The current strength should be from two to three milliampères. The best way to use it in capillary nævi and port-wine marks is by making multiple punctures in parallel rows, perpendicularly to the skin and down through its entire thickness. To expedite matters, one may use either a circle of needles set in a handle or a row of three needles. The negative pole is to be connected with the needle-holder, and the operation is to be conducted in the same way as in removing superfluous hair. By this method it is possible to destroy small nævi entirely, and to diminish very much the unsightly appearance of large port-wine marks. As electrolysis necessarily destroys the skin, we must leave a scar. But this is less conspicuous than the nævus, and if the operation is carefully done the scar is soft, smooth, and pliable. There is also much less danger of a deforming scar from the use of a single needle than from a group of them. Therefore this method is preferable,

though more tedious. The punctures must not be made close together; at least a sixteenth of an inch should be left between them. After the nævus has been carefully gone over, it should be left alone for a couple of weeks or more for the full effect of the operation to be seen. It can be gone over again, and another interval of time allowed, and so on till the growth is destroyed as much as possible.

Besides electrolysis we may use multiple scarifications obliquely to the skin. Or we may use the ethylate of sodium freshly prepared and applied to the absolutely dry skin, using a brush or glass rod. To avoid scarring, only a small part of the nævus must be attacked at a time. A crust will form, which must be left to come away of itself. Fuming nitric acid or the acid nitrate of mercury may be stippled over the growth. Or vaccination may be performed over it. Or multiple punctures may be made by means of a steel needle dipped in nitric or carbolic acid. Marshall Hall advocates breaking up the nævus by introducing a cataract-needle close to the edge of the growth, pushing it across to the opposite side, then nearly withdrawing it, and again pushing it in at a little distance from the first puncture. But electrolysis is the best and most controllable method.

For cavernous nævus we may use electrolysis also, but here we pass the needle obliquely into the skin in the hope of striking the deep vessels. It is well, sometimes, to pass the needle from the edge deep under the nævus and clear through to the other side, let the current pass for half a minute, partially withdraw the needle, and again push it in another direction. Some prefer introducing two needles, connected each with one pole of the battery, in opposite directions. A platinum or gold needle must be used with the positive pole. A current strength up to five milliampères is often necessary to destroy these growths. Excision may be performed, but sometimes this gives rise to alarming hemorrhage. Multiple punctures with a steel shoemaker's awl, heated to a red heat and allowed to cool to a black heat, or the point of a Paquelin or galvano-cautery heated to a dull red, are other good methods of treatment.

It has been proposed to use a metallic plate perforated with a number of holes with which to exercise strong pressure upon the nævus while the galvano-cautery is introduced through the holes. Injections of carbolic acid, perchloride of iron, alcohol, and the like, are effectual but dangerous methods. Setons are not used as much as formerly. Compression by an elastic bandage is at times curative when the nævi are located over bony prominences.

As many capillary nævi in children disappear in time, it is advisable not to interfere with them at once, contenting ourselves with painting them with collodion and waiting until the child is old enough to desire their removal. Unna thinks that the addition of ten per cent. of ichthyol to the collodion increases its efficacy. Of course, if they are very unsightly we cannot wait, nor should we temporize with cavernous nævi. In children one works most comfortably by using an anæsthetic, but it is not absolutely necessary. Keloidal scars may be an unfortunate result of treatment in some cases.

Prognosis. The prognosis should be guarded, and the cases carefully watched. All nævi may increase in size, though very many remain stationary.

Nævus Verrucosus. See Papilloma lineare.

Narbengeschwulst. See Keloid.

Nerven Nævi. See Papilloma lineare.

Nesselausschlag. See Urticaria.

Nettlerash. See Urticaria.

Neuralgia Cutis. See Dermatalgia.

Neuroma Cutis is an exceedingly rare disease, of which but few cases have been reported. Neuromata are small, flat, pinkish or pale-red firm tumors firmly imbedded in the skin. They are painful spontaneously and on pressure. The pain may be paroxysmal in character. They are relievable by surgical interference with the nerve.

Neuropathic Papilloma. See Papilloma lineare.

Nodositas Crinium. See Trichorrhexis nodosa.

Nodositas Pilorum Microphytica. See Tinea nodosa.

Nodosités Non-érythémateuses des Arthritiques. Brocq applies this name to cutaneous and subcutaneous tumors that he has met with in connection with the gouty diathesis. They are of two varieties. The first one he calls *ephemeral cutaneous nodules.* They occur upon the forehead and form ill-defined elevations of the skin, of small-pea to hazelnut size, and entirely painless. They are movable with the skin, though sometimes they are adherent. They appear first during the night and disappear within twenty-four hours.

The second variety is *the subcutaneous rheumatismal nodule.* It forms a small tumor resembling a gumma. The skin slides freely over it in most cases. The color of the skin is unchanged. It is firm and elastic to the touch. Generally such tumors are painful on pressure, at times spontaneously. In size they vary from that of a pea to that of an almond, and they are sharply defined. They may remain for days or weeks, when they disappear, leaving no trace. They often come in successive outbreaks. Their seat of predilection is about the joints, and upon the fibrous tissues that cover the superficial bones. They are generally discrete, and frequently very numerous. Their appearance often coincides with symptoms of pericarditis or pleurisy. Their treatment is that appropriate to the rheumatism that seems to be their cause, especially iodine and the iodides.

Nodulus Laqueatus is that condition of the hair in which it seems to tie itself into knots. The hair is usually dry and curly. It is probably caused by handling of the hair, and does not occur spontaneously.

Noli me Tangere. See Lupus vulgaris. It has been used as a synonym for rodent ulcer. (Crocker.)

Œdema Cutis, Acute Circumscribed. This disease is also called *angio-neurotic œdema, acute idiopathic œdema, periodic or giant swelling.* It is a question whether this is a form of urticaria or not. It is certainly allied to it in the suddenness of its onset; in the attending erythema and

digestive or other constitutional disturbances; and in the character of its lesions. It differs from urticaria in being recurrent in the same locations; in the shading off of the swellings into the surrounding skin; and in being unattended by itching. It is prone to occur upon the face, and there often closes one or both eyes in an enormous swelling; or the lips so that the mouth cannot be opened. In some cases a history may be obtained of the occurrence of the same disease in other members of the family. It usually begins in early adult life and tends to recur. It may occur on the mucous membranes, causing suffocative attacks if the larynx is involved, and acute digestive disturbances if the stomach is affected. It occurs in various parts of the body as dull-red swellings that appear suddenly and disappear in a few hours. While these do not itch, the patient complains of burning, tension, and throbbing. In the present state of our knowledge it is probably well to regard it as urticaria œdematosa. The treatment is the same as in urticaria. (See Urticaria.)

Œdema Neonatorum. This disease was formerly confounded with sclerema, but is now separated from it.

SYMPTOMS. It is a rare disease, that begins upon the legs within the first three days of life. The œdema spreads upward along the thighs, shows itself upon the hands, then upon the genitals and back. It is hard, and pits only on deep pressure. The skin is of a violaceous red or more or less intense yellow, and feels cold. The infant is comatose; its pulse is feeble; its breathing labored; and its cry sharp. A high temperature may exceptionally be present. Death usually results on account of some pulmonary affection, or from collapse. Exceptionally, recovery takes place.

ETIOLOGY. The disease occurs in feeble, ill-nourished children, in those prematurely delivered or exposed to poor hygienic surroundings.

DIAGNOSIS. It differs from sclerema in being more limited to certain localities; in the skin being more livid from the first, and not so hard; in affecting the dependent parts; and in lacking the stiffness of the joints. (Crocker.)

TREATMENT. Though the prognosis is exceedingly bad, an attempt should be made to nourish the child as well as possible by artificial feeding; it should be wrapped in flannel and kept warm; and the limbs should be rubbed with warm oil, or camphorated alcohol, in such a way that the blood is forced toward the heart.

Œil de Perdrix. A soft corn.

Oligotrichia. See Alopecia.

Onychatrophia. See Atrophia unguium.

Onychauxis, Onychogryphosis. These are both hypertrophies of the nail, either in length, breadth, or thickness; or in all at the same time. When the growth is markedly forward and the nail is much thickened, it is called onychogryphosis. The nail in these instances generally turns to one side after reaching a certain length, sometimes so much so that a big-toe-nail may lie over the second and third toes. If the hypertrophy is lateral, we are apt to have onychia—ingrowing toe-nail. The hypertrophied nail is rugous, but highly polished, brown, and there is often an accumulation of scales under it, which at times gives rise to a bad odor from decomposition. The toe-nails are those most often hypertrophied, but the finger-nails may be so affected.

ETIOLOGY. Badly fitting boots and neglect of proper care of the nails are causes of onychauxis and onychogryphosis. They often arise without discoverable cause. They may be due to a congenital predisposition. They very often occur as part of some chronic skin or constitutional disease, such as eczema, psoriasis, leprosy, syphilis, and ichthyosis. The thickening may be due to disease of the matrix or to a thickening of the horny layer only.

TREATMENT. The hypertrophied nail may be removed by mechanical means, such as by a file, saw, or knife. The continued use of salicylic acid sometimes will cause the thickened mass to fall off. The oleates of tin and lead; the continuous wearing of rubber cots; and liquor potassæ, are also efficacious in softening the thickened mass of the nail. The action of all these agents is as-

sisted by daily removing the softened layers by mechanical means. When the hypertrophy is but a part of some other disease it will be benefited by the same means as will benefit the cause from which it arises. If it is due to an inflammatory disease of the nail-bed or matrix, that must receive attention. (See Onychia and Paronychia.) After the nail-deformity has been overcome it may return.

Onychia or **Onychitis.** By this is meant acute inflammation of the matrix and nail-bed. The end of the finger or toe is reddened and swollen, and there is more or less throbbing pain. The nail is lifted from its bed, more or less pus escapes from underneath it, and it is eventually shed. The inflammation often spreads to the adjacent parts of the finger, and then we have that condition commonly called *whitlow*. When the nail falls a spongy nail-bed is left, often with exuberant granulations. Under proper treatment a good nail may be reproduced, though in many cases either a very much deformed one will result or one that differs somewhat in appearance from the other nails. In some cases, instead of this phlegmonous form, we have a dry inflammation that is known as onychia sicca. Here the nail is discolored, its edge thickened and brittle, its surface rough and more or less pitted. Eventually the nail is shed. This condition is met with most often in syphilis. A chronic onychia is occasionally seen, and is one of the causes of onychauxis.

ETIOLOGY. Onychia is due to traumatism or to some other disease of the skin, such as syphilis, eczema, psoriasis, parasitic diseases, dermatitis exfoliativa, rheumatism, and the strumous state.

TREATMENT. The treatment of onychia varies with the stage of the disease and with the cause. Occurring as part of some general disease of the skin, the treatment appropriate to the general disease will be beneficial to the onychia. Arising as an independent disease, or resulting from traumatism, the application of a ten to twenty per cent. resorcin ointment or plaster, or painting with tincture of iodin, will often abort the disease in an early stage. If the disease has gone on to suppuration, surgical procedures

will have to be resorted to, such as splitting of the nail or its removal as a whole, and subsequent dressing with iodoform, aristol, or a bichloride solution.

Onychomycosis. This term means the invasion of the nail by a fungus, such as the trichophyton or achorion. For further information see Trichophytosis and Favus.

Osmidrosis. See Bromidrosis.

Osteosis Cutis. A case of osteosis of the skin of the foot was reported by Sherwell[1] in 1892. It involved the plantar surface of the left foot about the heel and on the fourth toe. The patches were of cartilaginous hardness, with horny surfaces studded with nodosities. The patches were fairly movable over the underlying parts. They were painful when stepped on. The patient was a girl six years old. The patches were excised, but formed again within six months. A histological examination by Coleman[2] showed that they contained cancellous bone.

Pachydermatocele. See Dermatolysis.

Pachydermia. See Elephantiasis.

Paget's Disease of the Nipple. Synonyms: Mamillaris maligna; Malignant papillary dermatitis; Epithéliomatose eczematoïde de la mamelle (Besnier).

Symptoms. This is a rare disease of the skin that is named after Paget, who first described it in 1874.[3]

It usually occurs in women over forty years of age, and at first has the appearance of an eczema madidans—that is, it presents "a florid, intensely red, raw surface, very finely granular, as if the whole thickness of the epidermis had been removed. From such a surface, on the whole or greater part of the nipple and areola, there is always a copious, clear, yellowish, viscid exudation." Besnier believes that its primary stage is a keratosis, which, under any irritation, assumes an eczematous appearance. The edge of the patch is sharply defined and slightly raised. Sometimes, instead of the raw surface, we have crusting,

[1] Journ. Cutan. and Gen.-Urin. Dis., 1892, x., 119.
[2] Ibid., 1894., xii., 185.
[3] St. Bartholomew's Hospital Reports, vol. x., p. 83.

or even scaling. Telangiectases may be seen here and there. After months or years marked induration is manifest, pinching up the patch imparting the sensation, as described by Mr. Morris, of "a penny felt through a cloth." Burning or itching is complained of, which makes the disease the more nearly resemble an eczema. But it does not yield to the ordinary treatment of eczema, and its border gradually extends. The female breast, usually the right one,[1] is the most often affected, and there it always begins at the nipple, spreading thence over the areola and skin. After a few months, or not until twenty years, signs of scirrhous cancer appear. The nipple becomes more and more retracted and ulcerated. Shooting pains are complained of. Hard nodules develop in the raw surface or deep down in the skin. The mammary gland itself may become affected. The disease in most cases is unilateral. The cancerous cachexia develops later with ganglionic enlargements. Crocker and Pick have met with it on the scrotum and penis, and one case has been reported of involvement of the nipple of a man.

PATHOLOGY. It is still an open question whether the disease is malignant from the start, or, beginning as a simple inflammation, becomes malignant, just as we find epithelioma of the tongue developing upon a leucoplakia. Later investigations seem to indicate that the process is epitheliomatous from the beginning. J. A. Fordyce's[2] investigations show the disease to be "an inflammation of the papillary region of the derma leading to œdema and vacuolation of the constituent cells of the epidermis, followed by their complete destruction in some places and abnormal proliferation in others." The changes in the lactiferous ducts are secondary.

DIAGNOSIS. Though very important, it is exceedingly difficult at first to differentiate positively a case of Paget's disease from an eczema. *Eczema* of the nipple is very common during the childbearing period, while Paget's disease occurs most commonly after the climacteric. In eczema we do not have, as a rule, the raw granulating

[1] Wickham: Maladie de Paget. Paris, 1890.
[2] New York Med. Journ., 1897, lxvi., 445.

surface of Paget's disease, while we do have more variation in the course of the disease, exacerbations, and seasons of apparent quiescence. In eczema the patch is not so sharply defined, and its border is not raised; about it there are apt to be outlying pustules or vesicles, and there is not the papyrus-like induration. When the nipple becomes retracted and ulcerations take place, together with shooting-pains and enlarged lymphatics, the diagnosis is easy.

TREATMENT. At the beginning, and while the diagnosis is still doubtful, the usual remedies for eczema should be tried. If these fail, as they will if the disease is not eczema, or if the right diagnosis is arrived at, powerful caustics must be used, if the disease is still superficial. We may use, as recommended by Darier, a solution of chloride of zinc, one in three, to produce an exfoliation of the diseased epidermis, and follow it with a mercurial plaster, alternating with iodoform or aristol. Or a chloride of zinc paste may be kept on, spread thickly on lint, for four to six hours, and the slough poulticed off or allowed to separate under wet boric lint, under oiled silk, as recommended by Crocker.

The paste used in the Middlesex Hospital in these cases is made as follows:

R	Zinci chlorid.,	ʒiv:	16	
	Liq. opii sed.,	ʒiv:	16	
	Amyli,	ʒiss:	6	
	Aquæ,	ʒj:	32	M.
S. Ft. pasta.				

When there is ulceration, but not much induration, the surface should be thoroughly curetted and dressed antiseptically. When nodules have formed and there is marked induration under an ulcerated surface, the whole diseased surface must be freely excised or the breast removed entire. In fact, it seems to me best to amputate the breast as soon as the diagnosis is made, when the patient is past the childbearing period. If an operation or the use of caustics is inadvisable for any reason, relief to the pain and discomfort may be had by dressing with a fuchsine solution one per cent. strength.

Panaris Nerveux of Quinquaud belongs to that group of obscure diseases in which stand Morvan's disease and syringomyelia. It is characterized by swelling of the extremities, slight redness, and attacks of intense pain, terminating in eight to fifteen days by fissure of the finger-end and fall of the nail. Sometimes the skin of the finger-end becomes sclerosed and atrophied.

Brocq advises in its TREATMENT the constant application of chloroform liniment, and of irritant lotions or frictions to the cervical region and along the course of the nerves supplying the parts. Internally, he advises the valerianate of ammonia or of quinine.

Panaritium. See Paronychia.

Panne hépatique. See Chloasma.

Papilloma. By this term is meant a papillary outgrowth from the skin. Such are common warts, verrucous eczema, papillary excrescences following ulceration, Kaposi's dermatitis papillaris capillitii, ichthyosis hystrix, nævus unius lateris, and the like. The term is, therefore, of uncertain significance. Some authors have described papillomata apart from the above-designated diseases, and Hardaway reports at length a case of general idiopathic papilloma in a seven-months-old child. Mental defects have been noted in some of these cases. A muco-purulent secretion often is present, welling up between the papillæ. The condition is a rare one. Under the name of *papilloma area elevatum* Beigel has described one of these rare cases.

Papilloma Lineare. Called also *papilloma neuroticum*, *ichthyosis hystrix*, *nerve nævus*, *nævus unius lateris*. This is commonly described under ichthyosis. As it has no symptom in common with that disease, it is best to regard it as a separate disease. It occurs in the form of warty, papillary growths that may be isolated though grouped, and of pinhead size; or they may be massed together into elevated, dark-green plates traversed by deep lines; or arranged in long lines of parallel rows. These growths may occur on only one side, and in a single region; or on both sides of the body and in several regions. They some-

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times seem to follow the course of nerves in their distribution. While often congenital, they sometimes do not develop until a number of years after birth, and all tend to increase until early adult life. The peculiar arrange-

FIG. 53.

Papilloma lineare. (Fox[1].)

ment of the lesions distinguishes the disease from ordinary warts.

The TREATMENT consists in scraping away the growths with a curette; or applying a ten or twenty per cent. ointment or plaster of salicylic acid.

Parakeratosis. Two forms of parakeratosis have been

[1] G. H. Fox: The Skin Diseases of Children. N. Y., 1897.

described, namely, Parakeratosis scutularis[1] and Parakeratosis variegata.[2]

Parakeratosis Scutularis. This case was that of a man forty-one years old. It occurred on the scalp, the whole of which, with the exception of a strip at the periphery, was covered by a thick, greasy crust that enveloped the hair in bundles. Some single hairs had on them cuffs of yellowish-white, waxy, horny substance, one inch or more long, that were in connection with the crusts on the scalp. The growth of the hair was not much interfered with. At the edge of the scalp was a hairless, red, dry, and rough strip.

Parakeratosis Variegata. Of this form, two cases are reported. Both were men. The eruption appeared on the thighs, chest, and neck, and later involved nearly the whole body, except the head, palms, and soles. The color of the eruption was red, forming an irregular network with small sunken patches of normal skin. It was scaly and the skin was infiltrated.

Parasitic Diseases. The diseases of the skin caused by parasites may be divided into two classes: 1. Those due to vegetable parasites. 2. Those due to animal parasites.

Group 1 comprises favus, ringworm, chromophytosis, erythrasma, and pinta. These will be found described under their proper headings. In 1899 E. Lusk[3] reported a case whose symptoms resembled those of scabies, but it was due to mucor corymbifer that was found escaping from the vesicles.

Group 2 comprises a large variety of parasites. Scabies and pediculosis, due respectively to the acarus and pediculus, are described at length in this book. Besides these we have—

The *leptus autumnalis*, harvest-bug, or mower's mite, that bores its head into the skin, causes great itching, and induces violent scratching and consequent excoriations.

[1] Internat. Atlas of Rare Skin Diseases, No. 3.
[2] Monatshefte f. prakt. Dermat., 1890, x., 404.
[3] Med. Rec., 1899, lvi., 204.

The *demodex folliculorum* is described in relation with the comedo.

The *pulex penetrans*, chigoe, or jigger, that resembles a flea, but penetrates under the skin with its head, sets up inflammation and, perhaps, ulceration and gangrene, and has to be dug out of the skin with a blunt needle.

The *pulex irritans*, or common flea, whose ravages are so well known as not to require description.

The *cimex lectularius*, or common bedbug, attacks the skin for its food, punctures it, and at the same time injects an irritating fluid to increase the hyperæmia and the food supply. A wheal, or raised red spot with a central puncture, follows the bite, and a purpuric spot results. The irritation is relieved by any of the means serviceable in urticaria.

Gnats and *mosquitoes* and their effects are too familiar to all of us to require extended notice.

Ixodes, or wood-ticks, the *filaria sanguinis* and *filaria medinensis*, the *tænia solium*, and the *echinococcus*, all find lodgement at times in the human skin. These parasites do not exhaust the list, but are the principal ones.

Parchment Skin. See Atrophia cutis.

Paronychia. This affection is popularly known as a whitlow, run-around, or ingrowing toe-nail. Ingrowing toe-nail results from the nail shoving or being shoved into the soft parts, either on account of disease of the nail itself, or of ill-fitting shoes, or of injury. The big toe-nail, at its inner or outer edge, is the most common site of the disease, though any toe may be affected, and even the finger may suffer. The furrow, fold, and bed of the nail all become inflamed, ulcerated, and exquisitely tender, discharging more or less pus. It is said to be more common in young people than in old, and far more frequent in men than in women. Paronychia of either the ulcerative or non-ulcerative form is frequently met with in syphilis.

TREATMENT. Severe cases of paronychia most often find their way to the surgeon's hands. In syphilitic paronychia general antisyphilitic treatment is required. In the non-ulcerative form mercurial ointment, diluted with

one or two parts of diachylon ointment, may be used, or the mercurial plaster. In the ulcerative form the parts should be cauterized with nitric acid or a strong solution of acid nitrate of mercury, followed by water-dressings. Afterward the part may be dressed with iodoform or aristol. Bandaging, strapping with mercurial plaster, and the use of rubber cots are also useful methods of treatment.

In ingrowing toe-nail the nail should be filed down the middle, or, if that does not relieve the pressure, it may have to be removed in part or entire. The insertion of borated lint between the nail and the nail-fold, or using boric acid in powder first and some threads of lint or a little absorbent cotton to separate the parts, and strapping the toe with adhesive plaster, will also answer well. If ulceration has taken place, the ulcerated surface should be dressed with iodoform or aristol. If the ulceration be covered with exuberant granulations, they should be touched with the nitrate of silver stick. As a preventive of the trouble, wearing well-fitting shoes and keeping the nails clean and cut down the middle are the best means at our command.

Paxton's Disease. See Tinea nodosa.

Pediculosis. Synonyms: Phthiriasis; Morbus pedicularis; Pedicularia; Lousiness.

SYMPTOMS. There are three varieties of lice that infest the human species, namely, the pediculus capitis, pediculus vestimentorum, and pediculus pubis. Though they all belong to one family, they differ among themselves, and have distinct regions which they invade.

The *pediculus capitis* infests the head only, and of that the occipital region is the common seat of invasion. From there it generally spreads to the parietal region, which is one of the best places in which to seek for nits, and, maybe, all over the scalp. The lice cause irritation of the scalp both by their movements and by the insertion of their haustellum into follicles of the skin for feeding-purposes. Lice have no mandibles. There is no such thing as a louse-bite. They simply suck their nutriment by inserting their haustellum into the follicles of the skin.

The victim scratches to relieve the itching and irritation, and this gives rise to a dermatitis of eczematous character with the production of large pustules. A fully developed and characteristic case shows the hair in the occipital region matted together with a sticky secretion and, it may be, blood-crusts, more or less eczematous lesions and scattered pustules over the whole scalp, enlarged lymphatic glands in the neck, and perhaps a few small pustules on the neck and face. When a patient presents himself with a pustular eruption on the neck, or with a number of large, crusted pustules scattered over the scalp, pediculosis capitis should always be suspected, and search made for the pediculi or their nits upon the occipital and parietal regions. Very often no pediculi can be found; but if the disease is pediculosis, the nits will be discovered in the localities mentioned.

The *pediculus vestimentorum*, or body-louse, inhabits the seams of the clothing, where it lays its eggs, and which it leaves only for the purpose of feeding upon the skin. It inserts its haustellum into the follicles of the skin, and thus produces a small hemorrhagic spot, even with the surface of the skin, which is a pathognomonic lesion of the disease. This feeding gives rise to itching, and the victim scratches to relieve it, thus producing a second symptom, excoriations. These have one peculiarity, which is, that they are very apt to take the form of long, parallel scratch-marks, because the patient digs into his skin with all four nails at once. Moreover, as the lice live by preference in the shirt-band at the back of the neck, these long scratch-marks are most often seen over the shoulders. Whenever they are seen we should suspect lice. Excoriations are also seen on the inside of the limbs in locations corresponding to the seams of the clothing and about the waist corresponding to the location of the waist-band. In certain individuals, besides excoriations and hemorrhagic specks, we will find ecthymatous pustules, ulcerations, and, in very old cases, a great deal of pigmentation, so that the skin appears as if affected with a general chloasma. Any of these symptoms—hemorrhagic specks, excoriations, and itching, which is incessant in pronounced cases—should lead us to suspect lice, and a careful search of the seams

of the clothing will reveal them, unless the patient has changed everything before coming to us. It must be remembered that the lice dwell both in linen and woollen clothing, and, in bad cases, in the bedding also. W. A. Jamieson[1] has found in many cases that the lanugo hairs, especially on the back and shoulders, have nits on them, and believes that this fact accounts for the relapses often seen in the disease.

The *pediculus pubis*, crab-louse or morpion, has a far wider feeding-range than the other varieties. Though its favorite feeding-ground is the pubic region, it may be met with upon the hair of the abdomen, chest, axillæ, beard, eyebrows, and eyelashes. Itching, excoriations, and eczematous lesions are the symptoms it gives rise to, though the disturbance is not so great as that caused by the other forms of lice. It is the least common variety. It requires careful search and a sharp eye to discover the vermin at times, as they are almost transparent, and usually are attached to the hairs head downward, and close to the skin. Cobbold taught that the pediculus that inhabits the eyelashes was a distinct species, the pediculus palpebrarum; but by most authorities the distinction is not made. In some cases, instead of red punctate marks, we find dull or slaty-gray, or pale-blue, lentil- to split-pea-sized macules scattered over the pubes, abdomen, extensor surface of the arms, axillæ, and inside of the thighs. These are known as *maculæ cœruleæ*, or tâches ombrées. They do not disappear on pressure. They last for a few days, and then disappear of themselves. To give rise to these spots there must be a predisposition on the part of the skin. Most of the few reported cases have been in debilitated subjects. According to Duguet,[2] the macules are produced by the emptying of the contents of the salivary glands of the louse beneath the human epidermis.

ETIOLOGY. These different varieties of pediculosis are due to different varieties of lice. The head-louse (Fig. 54) is about two millimeters long and one millimeter broad, with a triangular head and broad thorax and short legs. The

[1] Brit. Journ. Dermat., 1899, xi., 193.
[2] Gaz. des Hôp., 1880, liii., 362.

body-louse (Fig. 55) is larger than the head-louse, being two or three millimeters long, with a more oval head and longer legs with more developed claws. The pubic louse is broader and flatter than either of the others, with rounder head, longer, stronger, and more claw-like legs, resembling somewhat a crab (Fig. 56). The color of the lice is gray or white. They propagate with great rapidity, the young hatching out in six or seven days, and being capable within eighteen days of propagating their species. It has been calculated that two female lice might become the grand-

Fig. 54.

Pediculus capitis.—Male.
(After Küchenmeister.)

Fig. 55.

Pediculus vestimentorum.
(After Küchenmeister.)

mothers of 10,000 lice in eight weeks' time. The pediculus capitis deposits its eggs close to the scalp and secretes a glue-like substance that sticks the ova to the hair. There may be but a single ovum on a hair, or many of them. The distance of the nit from the scalp shows the length of time that the disease has existed. As it takes the hair about a month to attain the length of three-fourths of an inch, if we find the nit that distance from the scalp we know that it was deposited at least one month before. The severity of the symptoms to which the lice give rise will vary with the individual, some people being far more susceptible than others. Infection takes place from other people or from

infested body or bed clothing. Women and children are the most frequent victims of pediculosis capitis; adults, and especially elderly people, of pediculosis vestimentorum. Pediculosis pubis is most frequently contracted from impure sexual intercourse, and is, therefore, most common in young adults. Dirt and uncleanness favor all forms, though even the most cleanly may at times harbor vermin.

DIAGNOSIS. Pediculosis capitis needs to be diagnosticated from *eczema*. The characteristic location of its lesions upon the occipital region and nape of the neck, with its scattered and discrete large pustules over more or

FIG. 56.

Pediculus pubis. (After SCHMARDA.)

less of the scalp, should always suggest pediculosis; then if the lice or their ova are found by searching the hair, the diagnosis is established. Nits here, as elsewhere, are differentiated from epidermic scales by being located upon the side of the hair, while the scale has a hair passing through its center (Fig. 57). The nit, too, is of a yellowish color, somewhat pear-shaped, with its larger rounded end upward; and it adheres closely to the hair, so as not to be readily removed. It is not always easy to distinguish pediculosis vestimentorum from *pruritus cutaneus*, especially if at the time the patient presents himself he has clean clothes on throughout. Both may occur in

elderly people, and both may last a long time with no other lesion than scratch-marks. In pruritus we may find evidences of atrophic skin changes; the itching is often paroxysmal, and made worse by the patient becoming overheated. If we find the parallel scratch-marks over the shoulders and the hemorrhagic specks, we can make a positive diagnosis of pediculosis. From *urticaria* pediculosis vestimentorum differs in having hemorrhagic specks and in the parallel scratch-marks. Urticaria may complicate a pediculosis. *Scabies* differs from pediculosis in appearing by preference upon the anterior face of the wrists, upon the breasts in females, upon the penis of males, and about the umbilicus of both sexes. Its lesions are not long, parallel scratch-marks, but small scratched papules. If the lice or their ova can be found in any case, the diagnosis of pediculosis is made easy. *Dermatitis herpetiformis* differs from pediculosis in wanting the parallel scratch-marks and in the markedly grouped character of its lesions. There will often be found groups of vesicles scattered about the skin. There can be no difficulty in diagnosing pediculosis pubis. Any itching about the pubic region should lead to an investigation, which, if carefully made, will reveal the pediculi or their nits.

FIG. 57.

Ova of head-louse attached to hair. (After KAPOSI.)

TREATMENT. The most ready means of curing the disease when in the hairy regions is to shave the hair off and make some emollient application to the scalp to cure the eczema. But this is not advisable, excepting in children and in men in hospitals, and is not necessary. The most speedy and practicable method in public practice is to soak the hair of the

head or pubic region with raw petroleum or kerosene, with or without diluting it with sweet oil. This may be done night and morning for two days, and the parts then washed with soap and water. This will effectually kill all the lice, and probably destroy the life of the ova. The latter must be removed for fear that they are not dead, and for this purpose we may use a fine-toothed comb to the hair or pull the hair through a cloth saturated with vinegar or dilute acetic acid, which will soften the glue-like substance of the nits. No attention is to be paid to the dermatitis until after the cause of it is removed, when it will rapidly get well under any simple treatment. In private practice an infusion or tincture of delphinium staphisagria (lark-spur seeds), or a ten per cent. solution of carbolic acid, or a half to one per cent. solution of bichloride of mercury, may be substituted for the petroleum. The bichloride should not be used if there is much dermatitis. The ointment of the ammoniate of mercury is efficient, but, as a rule, an ointment should not be used on hairy parts. Blue ointment is a well-known remedy for pediculosis pubis, but it is apt to set up a dermatitis that is undesirable, and should not be prescribed.

For pediculosis vestimentorum there is no use in making any application to the skin. The woollen clothes should be baked in a hot oven, and the underclothing and sheets should be well boiled. If this cannot be done, or new clothes obtained, powdered sulphur or staphisagria may be powdered in all the seams of the clothing, and a five per cent. ointment of carbolic acid applied to the body. Jamieson recommends smearing the whole body in all cases with paraffin and then giving a warm carbolic acid bath.

Pelade. See Alopecia areata.

Peliosis Rheumatica. See Purpura.

Pelioma Typhosum. See Maculæ cæruleæ.

Pellagra. Synonyms: Risipola lombarda; Mal de la rosa; Mal roxo; Lombardian leprosy.

Symptoms. But few cases of this disease have been

reported in this country. Since the number of Italians is constantly increasing here it is important for us to be able to recognize the disease. It has prodromal symptoms of progressive weakness, intestinal catarrh, lassitude, giddiness, headache, and burning sensations in back, limbs, hands, and feet. These make their appearance in the spring, and shortly after an erythema affects the back of the hands down to the articulation of the first and second phalanges, the back of the wrists and forearms up to the elbow, the back of the feet, if the person goes barefoot, the front of the neck and chest to the lower edge of the first piece of the sternum, and, in women and children, the forehead, nose, and cheeks—that is, all those regions exposed to the sun. The color is bright, dark, or livid red, and is not a simple erythema, as the color cannot be made to disappear completely under pressure. The skin is often so swollen as to prevent all work. Bullæ may form upon the affected parts and be followed by erosions. In a few weeks desquamation begins, but the skin continues discolored and thickened up to July or August, when a gradual decline of all the symptoms takes place. During the winter the patient may appear quite well, but a relapse is pretty sure to occur during the next spring, and to recur each succeeding spring with ever-increasing severity of all the symptoms; the patient emaciates, loses strength, develops grave cerebro-spinal neuroses, sinks into a typhoid state, and dies. The skin becomes atrophied, smooth, shining, cracked, or it may be thickened. There is a loss of cutaneous sensibility, and the erythematous redness gradually extends over the whole surface of the body. The average duration of the disease is five years.

Etiology. The disease is endemic in northern and central Italy, especially in Lombardy, Venetia, and Emilia; in the southwestern part of France, and in the northern part of Spain. It may occur anywhere. Women are most subject to it, children least so. It seems to be a disease fostered by poverty, want, and bad hygiene, and to be induced by an almost exclusive diet of decomposed or fermented maize, or, possibly, other grains. Some cases have been traced to the drinking of spirits made from

damaged maize. It is, therefore, similar in origin to ergotism. It is not contagious or hereditary.

DIAGNOSIS. A suspicion of a case being one of pellagra should be aroused whenever an erythema upon the exposed parts is met with in a person coming from the regions in which the disease is known to be endemic, especially if it is combined with more or less lassitude and hebetude.

TREATMENT. The treatment of the disease is mainly hygienic and symptomatic. Crocker has faith in the efficacy of arsenic for adults, and frictions with chloride of sodium solution in children.

Pemphigus. Synonyms: Pompholyx; (Ger.) Blasenausschlag; (Ital.) Pemfigo.

A chronic disease of the skin characterized by the eruption of successive crops of bullæ upon the apparently sound skin and with either transient or no antecedent erythema.

At one time every bullous eruption was a pemphigus, but with more careful observation and study a number of bullous eruptions have been established as distinct diseases. Many cases now included under dermatitis herpetiformis used to be regarded as pemphigus. It is probable that this process of elimination will continue. In the meantime a considerable degree of uncertainty pervades our knowledge of the disease, both as to its symptomatology and etiology, and we can only stand and await further developments. While in this attitude we must have some sort of a chart to guide us, and it has been my object to draw its lines with as great sharpness as possible.

The disease is a rare one in this country, only 385 cases being reported in a total of 309,406 cases in the statistical tables of the American Dermatological Association from 1877 to 1897.

SYMPTOMS. It is usual to describe two varieties of pemphigus, namely, pemphigus vulgaris and pemphigus foliaceus. Besides these we have pemphigus vegetans and pemphigus neonatorum.

Pemphigus Vulgaris may begin with an outbreak of

bullæ, or there may be more or less constitutional disturbance before their appearance. The latter condition is more often seen in debilitated subjects, children, and old people, and consists in chilliness, nausea, and, perhaps, a rise of two or three degrees of temperature. These constitutional disturbances may occur before the appearance of each crop of bullæ. The characteristic eruption is an outbreak of two or more up to a hundred or more pin-head-sized vesicles that in a few hours develop into tense, oval, hemispherical, prominently raised, fully distended bullæ with translucent contents. The size of the bullæ varies; it may be but one-eighth of an inch in diameter, or by the coalescence of several neighboring bullæ, large, irregular ones of two or three inches in diameter may be formed. One distinguishing feature of these bullæ is that they have no areola, but spring up at once from the seemingly healthy skin. Their contents soon become turbid, or perhaps purulent, and then a slight inflammatory halo may form. Rarely hemorrhage into the bullæ occurs. The bullæ do not tend to rupture spontaneously, but to dry up, and leave the dried cover as a crust. If they are ruptured accidentally, an excoriated place is left that heals more or less readily, according to the general condition of the patient. Some pigmentation may be left for a time to mark the site of the bullæ.

This eruption may take place anywhere, but affects particularly the lower part of the face, the trunk, and limbs. It is usually bilateral, and may be roughly symmetrical. The life of the individual bulla is two to eight days; but while one crop is disappearing a new one occurs, and the duration of the disease may thus be measured by weeks or months. Sometimes there is an interval of weeks or months between the outbreaks. In favorable cases a few crops appear, and that is all, the patient making a good and complete recovery. In less favorable cases, or when the eruption is very extensive, frequent relapses and many excoriations take place, the patient's strength becomes exhausted by the constant drain upon his system and loss of rest on account of the discomfort of his condition; he may die in a typhoid state, or of some intercurrent affec-

tion. A number of cases of death from the disease within two or three weeks have been reported, and to these the name of *acute pemphigus* is given. A few authorities have reported acute bullous eruptions running their course in three to six weeks as acute pemphigus. Many of these cases were probably cases of bullous erythema, as in them a preceding erythema is noted in the reports of the cases. Most cases run a chronic course, extending over months or years.

In rare instances a diphtheritic membrane may form at the site of the bulla, or, instead of healing taking place, a gangrenous process may be set up, with considerable destruction of tissue, or hemorrhage may take place in some of the bullæ.

Neumann has described as *pemphigus vegetans* a bullous eruption in which healing does not take place, but the base becomes covered with sprouting granulations and assumes an uneven surface marked by furrows and secreting a thin fluid. The raw patches thus formed spread slowly at their circumference, and neighboring ones coalesce. In women the first lesions are usually seen about the vulva, and from there the disease spreads over the genito-anal region. In all cases the regions affected are the axillæ, the root of the neck, the hands and feet, elbows, and scalp. It never becomes universal. Pigmentation in points often follows the drying up of a bullæ. The disease proves progressive; marasmus and, finally, death closes the scene. Most of the cases are in syphilitics.

All the mucous membranes may be affected by pemphigus, and the excoriations that thus form in the mouth add greatly to the discomfort of the patient. The conjunctiva is not spared, and if attacked serious deformity results.

Cases of *pemphigus neonatorum* have been reported from time to time, and epidemics of it have been described. These are so evidently septic in origin that they hardly admit of being classified under the heading of pemphigus. Careful reading of not a few outbreaks of *contagious pemphigus* reported in the German journals will convince one who is acquainted with the bullous form of contagious

impetigo that a mistake in diagnosis had been made by the *reporter*. Still, until further evidence is forthcoming, it is probably advisable to allow that both of these varieties of the disease do exist. *Pemphigus pruriginosus* is another variety made by writers. It fits in quite well under Duhring's dermatitis herpetiformis.

Pemphigus Foliaceus differs considerably from pemphigus vulgaris. It may begin as such or it may develop from pemphigus vulgaris. Behrend[1] teaches that the difference between the two forms is simply a matter of coherence between the epidermis and corium, this being so slight in pemphigus foliaceus that we have a flaccid bulla instead of the tense, fully distended one of pemphigus vulgaris.

Pemphigus foliaceus is much the more rare variety of the disease, Crocker giving its occurrence as one in five thousand cases. Its characteristic lesions are flaccid bullæ, with opaque contents, that soon rupture and leave raw, moist surfaces with an edge of ragged epithelium. The fluid of the bullæ changes its position with the position of the patient, always seeking the most dependent part, and soon becomes purulent. After the disease has existed some time the patient emits a sickening odor on account of the large amount of raw surfaces of the ruptured bullæ that are bathed with sero-pus. Affecting at first only a limited space, by degrees the disease spreads so that the whole body-surface becomes red and weeping, looking like eczema rubrum, with crusts and areas of ragged epithelium. The palms and soles are often spared on account of the thickness of their epidermal coverings. When the skin is thus generally involved, it is difficult to establish the fact of the occurrence of new bullæ. The mucous membranes of the mouth and pharynx are affected in like manner, becoming converted into raw patches. The hair falls out; the nails become thinner, brittle, atrophied, and, it may be, drop off; and ectropion is apt to result from contraction of the skin about the eyes. The mucous membranes are also attacked, which greatly adds to the patient's discomfort.

[1] Vierteljahr. f. Dermat. u. Syph., 1879, vi., 191.

The condition of the patient is most deplorable in these extensive cases: his skin is stiff and sore, and perhaps smarts; and after months or years he succumbs to the drain on his system, sinks into a typhoid state, and dies. During the early part of the disease there may be no constitutional disturbance. But eventually death is quite sure to result, if not from the disease, from some intercurrent affection against which the patient is unable to offer any resistance.

ETIOLOGY. We know very little about the causes of pemphigus. The tropho-neurotic theory of the disease offers us a cloak for our ignorance, and perhaps is, after all, the true one. Experiments have demonstrated that bullæ can be made to form by operations on the spinal cord, and observation has shown that bullæ do form in certain spinal diseases. Both sexes are subject to the disease. Children are more often affected than adults. The septic origin of certain bullous eruptions has already been spoken of under the heading of pemphigus neonatorum, and a number of cases of acute pemphigus occurring in butchers and in those engaged in handling meats have been reported by G. Pernet and W. Bullock.[1] All these ended fatally in a few days. Bullous eruptions are hereditary in some families, and in some subjects follow slight injuries to the skin. This is named Epidermolysis bullosa, which see. Chilling of the body seems to have been the exciting cause of some cases. Most subjects of the disease are debilitated. Some have advanced the theory that an excess of ammonia in the blood or defective kidney-elimination is the cause of the disease. Attacks of the disease have been observed to occur with each new pregnancy in some women.

PATHOLOGY. "Most authors regard the actual formation of the bulla as due to an inflammation of the papillary layer, with outpouring of fluid from the vessels; but Auspitz calls it an akantholysis, or loosening of the prickle-cell layer, by the sudden escape of fluid from the vessels, destroying the young prickle-cells and lifting up the epidermis as a whole. Any inflammatory phenomena,

[1] Brit. Journ. Dermat., 1896, viii, 157.

he thinks, are secondary." (Crocker.) Micro-organisms have been found in the fluid both of the bullæ of chronic and acute pemphigus, and a peculiar diplococcus has been demonstrated by several observers in apparent causal relation to the disease.

Diagnosis. If we regard the pathognomonic symptoms of pemphigus vulgaris as fully distended bullæ springing up out of the sound skin without any antecedent erythema and without inflammatory halo, and occurring in crops so as to run a chronic course, then little difficulty will arise in diagnosis. A bullous *erythema* has bullæ arising upon an erythematous base or with erythematous lesions elsewhere, and runs a comparatively acute course. *Dermatitis herpetiformis* differs from pemphigus in the grouping and multiformity of its lesions, and the great amount of itching that attends it. No matter how long it has lasted, it is seldom attended by the constitutional disturbances that are met with in pemphigus chronicus. In bullous *urticaria* the bulla rises upon a wheal. The bullous form of *impetigo contagiosa* will be quite sure to present the characteristic impetigo pustules upon the hands or face, and search will probably discover some child with impetigo with whom the patient has come in contact. *Varicella bullosa* occurs epidemically, and runs a short course.

Pemphigus foliaceus when in its early stage, and affecting but a small area, is readily diagnosed by the occurrence of its flabby bullæ, arising without antecedent injury. After it has lasted long enough to involve a large area it is with difficulty differentiated from eczema rubrum and dermatitis exfoliativa. In fact, without the history of the case it is sometimes almost impossible to make the diagnosis. It may be differentiated from *eczema rubrum* by its crusts being made less of dried exudation than of epithelium, by the slighter amount of exudation, by the ragged look of some part of the disease, and by careful watching for and finding the large flaccid bullæ which will be sure to appear if the case is one of pemphigus. Moreover, a universal eczema rubrum is very rare, and the itching is more pronounced. *Dermatitis exfoliativa* differs from pemphigus in the absence of moisture and of bullæ, and

in the thinness of the exfoliated epidermis. *Lichen ruber acuminatus* is perfectly dry and presents characteristic papules.

TREATMENT. The drug upon which most reliance is placed in the treatment of this disease is arsenic. We may use Fowler's solution; or arsenious acid in pill-form, as the tablet triturate with piperina, or the Asiatic pill. Whatever form is given, it is advisable to begin with small doses and gradually increase them until the limit of tolerance is reached or the disease is controlled. Unfortunately it often disappoints us in its effects. Attention to diet and hygiene, and the general condition of the patient, with the judicious use of tonics, such as quinine, iron, and cod-liver oil, will often do as much, if not more, than arsenic to cure the patient.

Locally, dusting powders of oxide of zinc, starch, lycopodium, or bismuth in varying combinations; lotions of lime-water, borax, zinc, liquor plumbi subacetatis, and the like, prove helpful in allaying irritation and discomfort. Lassar's paste is also a good application. Unna[1] recommends equal parts of linseed oil, lime-water, oxide of zinc, and chalk, both to dry up the bullæ and prevent their return. Linimentum calcis with one minim of creosote to the ounce is recommended by Hardaway. The continuous warm bath has afforded great relief in the Vienna hospitals. The bullæ may be opened if they are troublesome. Alkaline and antiseptic mouth-washes will afford relief where the mucous membranes are affected.

PROGNOSIS. The chances of recovery are uncertain. While many cases of pemphigus vulgaris recover, relapses are the rule, and if the patient is not strong, or the disease has lasted a long time, a guarded prognosis should be made. Hemorrhagic, diphtheritic, or fungating bullæ are of bad augury. Pemphigus vegetans, pemphigus foliaceus, and pemphigus acutus arising from infection are almost invariably fatal.

Pemphigus Acutus Contagiosus. See Impetigo contagiosa.

Pemphigus Gangrænosus. See Dermatitis gangrænosa infantum.

[1] Monatshefte f. prakt. Dermat., 1888, vii., 108.

Perforating Ulcer of the Foot is an accident liable to occur in those in whom the nerve-supply of the foot is deficient, as in locomotor ataxia, syphilis, leprosy, and peripheral neuritis. The most common location for the ulcer is at the metatarso-phalangeal articulation of the great or little toe, or the cushion of the great toe. It may be only on one foot, or both feet may be affected. The process is slow, beginning as a proliferation of the epidermis like a corn, under which suppuration takes place, and an ulcer is left. This goes deeper into the tissues, until a sinus forms that reaches to the bone. The edges of the ulcer are hard. Usually there is little pain, though there may be hyperæsthesia of the surrounding parts. This painlessness distinguishes it from a suppurating corn. The palms may be affected in the same way as the soles. The disease is very intractable, and must be managed on surgical principles, amputation of the whole or part of the foot being required in some cases. Death may result from the disease.

Under the name of **Hand and Foot Disease** Hyde reports[1] three cases of ulcerations of the hands and feet that he regards as due to tropho-neurotic disturbances. In these cases, with or without functional disturbances, such as hyperidrosis and coldness of the hands and feet, bromidrosis, local anæsthesia, vertigo, faintness, and rheumatic pains, there were found various grades of dystrophia unguium, from roughness to onychogryphosis, tender and painful or insensitive maculations of the hands and feet, pigmentary patches on the palms and soles or the back of the hands or feet, or both; different dermatoses, such as erythema, eczema, ichthyosis, local alopecias, hypertrichosis, symmetrical tylosis, with or without spontaneous exfoliation or recurrence. After a time ulcerations formed on the hands or feet, or on both hands and feet.

Periadenitis Sudoripara. See Abscess of sweat glands.

Périfolliculitis Suppurées et Conglomérés en Placards. Under this lengthy title Leloir[2] has described and figured

[1] Phila. Med. News, 1887, li., 416.
[2] Ann. de derm. et de syph., 1884, v., 437.

a rare disease of the skin which specially affects the back of the hands.

SYMPTOMS. It seems to commence as a diffused red patch upon which develop small pustules, which itch slightly; or as small, red, more or less conglomerate, slightly itching elevations that form patches. The patches, however formed, are sharply defined, raised from two to five millimeters, round or oval, flattened, and of red, vinous, violaceous, or blue color. They vary in size from that of a ten-cent piece to that of a silver dollar, and are often crusted. When the crust is removed, the exposed surface is smooth or mammillated, but never papillomatous; and riddled with a number of pin-point- to pinhead-sized openings, corresponding to glandular orifices, many of which are closed with a plug of greenish, dried pus. Beside these openings there are a number of greenish points that are ready to become such whenever the epidermis over them is removed. At a more advanced stage the openings form small pinhead-sized ulcers. By compression of the patch these openings give vent either to a drop of pus or serous fluid, or little, elongated, vermicelli-like whitish masses. In still more advanced cases the patches become more elevated, fluctuation manifests itself, and sero-pus may be expressed. The patches are usually single, but may be multiple. The back of the hand and wrist are the usual locations of the disease; but it may occur upon the dorsum of the foot or the outer side of the thigh, or be disseminated, but chiefly located on the extremities. The course of the disease is acute. It is fully developed in eight days; it then continues a week or two and disappears in about twelve days more. If badly treated, it may last longer, and be followed by a papillary condition. It is unattended by subjective symptoms, except slight itching. It leaves either no trace of itself, or a delicate superficial cicatrix that disappears, or a slight staining that soon fades. The hair is unaffected, though the disease may involve its follicles.

PATHOLOGY. The disease is a purulent inflammation of the skin follicles, specially of the lanugo hairs, and the

pilo-sebaceous follicles of regions deficient in true hairs. It is possibly microbic in origin.

DIAGNOSIS. The disease is diagnosed from *trichophytosis* by its more rapid course, and recovery under simple treatment; by the hair being unaffected; and by the absence of the trichophyton in the hair. *Anthrax* differs from it in the more pronounced character of its local and general reaction, its central core, and inflammatory induration. *Tuberculosis verrucosa cutis* is much slower in its evolution, is serpiginous, and does not yield to simple treatment. *Eczema* differs from it in not having such sharply marked borders; in wanting the characteristic openings and livid tint; and in having more pronounced itching, a mucous, sticky discharge, and a comparatively long duration.

TREATMENT. The treatment is simple and consists in squeezing out the pus once a day, bathing the part for half an hour in warm carbolized water or a solution of boric acid, and covering with an antiseptic dressing. If papillæ have formed, they should be scraped off, and the surface touched with nitrate of silver. In some obstinate cases it may be necessary to scrape out the whole patch.

Perionyxis. See Paronychia.

Perlèche. According to Brocq, this is a disease occurring in infants and affecting the commissures of the lips. Their epithelium is pale, macerated, desquamating, while the skin underneath is red and slightly inflamed. Sometimes fissures will form that are painful, and may bleed when the patient widely opens his mouth. The inflammation may spread to the neighboring regions. It runs a course of two or three weeks, but is subject to relapse. It is contagious, and is due to a streptococcus.

It bears a close resemblance to the fissures of the lip met with in syphilis, but is marked by an absence of all other symptoms of syphilis.

The TREATMENT consists in touching the diseased parts with sulphate of copper or alum, or an antiseptic solution, and in carefully looking after the nursing-bottles.

Pernio. See Dermatitis calorica.

Pfundnase. See Hypertrophic rosacea.

Phagmesis. A rare condition in which it is said that feathers instead of hair adorn the body.

Phtheiriasis. See Pediculosis.

Pian. See Yaws.

Pian Ruboide. See Dermatitis papillaris capillitii.

Piebald Skin. See Leucoderma.

Piedra. Synonyms: Tinea nodosa; Trichomycosis nodosa.

Symptoms. This disease, or deformity of the hair, is said to occur only in Cauca, one of the United States of Colombia, and was first described in 1874 by Dr. N. Osorio, of the University of Bogotá. It consists in the occurrence along the shaft of the hair of from one to ten small dark-colored nodes which are very hard and gritty, and rattle like stones when the hair is combed or shaken. The stony hardness of the nodes gave the disease its name "Piedra," which is the Spanish for "stone." These nodes are always placed at irregular intervals along the hair-shaft, beginning at about half an inch from the point of exit of the hair, the root being unaffected. The disease occurs most commonly in women, men being rarely affected, and it is the head-hair alone which exhibits these nodes. The disease is non-contagious, and is met with only in warm valleys.

Etiology. Dr. Osorio thought that the nodes were produced by an agglomeration of epithelium in certain parts of the hair. Mr. Morris[1] believes it is due to the use of a peculiar mucilaginous linseed-like oil, which is used particularly by the native women to keep their hair smooth and shiny. Another theory is that it is due to the use of the water of certain stagnant rivers which is very mucilaginous. Heat seems essential for its production, as the employment of either of these fluids will not cause the disease in cold climates.

[1] Lancet, 1879, x., 407.

Microscopical examination of the affected hair shows that the nodes consist of a honeycombed mass of pigmented spore-like bodies, the whole mass arising from one cell which sends out spore-like columns radially in all directions. As soon as the cells have reached a certain size they seem to alter their shape, become darker in color, and form a pseudo-epidermis. It is, therefore, a fungous growth. The nodes were found to be very hard to cut, and when considerable force was used they broke.

DIAGNOSIS. Piedra differs from *trichorrhexis nodosa* in the stony hardness of the nodes, in its occurring principally upon the head-hair, in its probable etiology, and in the microscopical appearances it presents.

TREATMENT.—By the use of hot water the nodes can be entirely removed.

Pigmentary Mole. See Nævus pigmentosus.

Pigmentgeschwulst. See Melanotic sarcoma.

Pigmentkrebs. See Sarcoma.

Pigmentmal. See Nævus pigmentosus.

Pimples. See Acne.

Pinta. Synonyms: Mal de los pintos; Tinna; Caraate or cute; Quirica; Spotted sickness.

This disease occurs only in southern Mexico, Panama, and South America.

SYMPTOMS. According to Crocker, from whose work this account is drawn, it consists of scaly spots varying in color, shape, number, and size. They show themselves first on the uncovered parts, but may affect any or all of the cutaneous surface. The disease spreads by the peripheral extension of old patches and the formation of new ones. The patches are round or irregular in shape, sharply or ill defined, and of black, gray, blue, red, or dull-white color. The red and white patches are deeper-seated than the others, being located in the rete and corium. The patches may be of uniform color or of different tint, but do not change their color after they

have once formed. They are scaly and usually feel rough and dry. The hair grows gray and falls. There is some itching, and a bad odor emanates from the patient. The course of the disease is chronic and shows no tendency to recovery.

ETIOLOGY. The disease is contagious, and its spread is favored by dirt and neglect. It is most common in the poor natives of Indian stock. It is of fungous origin, and, in fact, seems to be allied to chromophytosis.

TREATMENT. The treatment is the same as for chromophytosis.

Pityriasis Alba Atrophicans. This disease begins in early life as a partly lamellar, partly branny desquamation of the skin without redness or any other form of efflorescence. The skin may be affected wholly or in part. After lasting ten to fifteen years it is followed by secondary atrophy of the skin, which becomes thinner, and soft. The subcutaneous fat is lost and the veins show through.

Pityriasis Lichenoides Chronica. This is the name given by F. Juliusberg[1] to a disease described by Neisser as Lichenoid and psoriasiform exanthem, and by Judassohn as Dermatitis psoriasiformis nodularis. It consists in a polymorphic eruption, which may occur anywhere on the body, though the scalp and face are nearly always free. It begins as red, pinhead-sized, flat, smooth papules. These flatten, and we have small patches with silvery-white, shining, delicate scales, resembling the scales of psoriasis. The eruption becomes better and worse, and is not amenable to treatment. It is a parakeratosis with superficial inflammatory infiltration in the corium and papillæ.

Pityriasis Maculata et Circinata. See Pityriasis rosea.

Pityriasis Nigricans. See Chromidrosis.

Pityriasis Parasitaire. See Chromophytosis.

Pityriasis Pilaris. See Keratosis pilaris.

Pityriasis Rosea. Synonyms: Pityriasis maculata et

[1] Arch. f. Dermat. u. Syph., 1899, l., 359.

circinata: Herpes tonsurans maculosus (Hebra); Roseola pityriaca Barlazzi: Pityriasis circiné et marginé (Vidal); Pityriasis rosée Gibert: Erythème papuleux desquamatif.

An acute disease of the skin characterized by an eruption of rosy-red macules that enlarge into dry, scaly, oval or annular patches with rosy-red peripheries and chamois-yellow, wrinkled centers: it runs a definite course and terminates in recovery.

Symptoms. Though Gibert described pityriasis rosea as early as 1868, the disease is but little known in this country, not because it does not occur, but because it is not recognized. It is one of the rarer skin diseases. Most writers tell us that its outbreak is preceded by slight constitutional disturbances, such as malaise, loss of appetite, and headache, with a slight rise of temperature just before the outbreak of the eruption. These symptoms, in my experience, have been as conspicuous by their absence as in the case of impetigo contagiosa. The eruption itself most often begins upon the upper part of the chest a little above the breasts, or, according to Brocq,[1] at the level of the wai-tband, anteriorly and a little to one side, where he locates what he calls the "primitive patch." The primary lesions are miliary or small papules of pale-red color, surrounded by an erythematous zone. These soon enlarge into rosy-red, slightly raised macules, and slowly increase peripherally into oval or rounded patches with well-defined borders raised somewhat higher than the centers. When the patches have attained a diameter of half an inch or more the centers begin to clear up by becoming of a yellow, old-parchment color, scaly and shiny, while the border is pale red. Later the center may disappear and rings only remain; or if two or more patches meet at their borders, irregular gyrate figures may be formed. All the lesions do not attain the same degree of development, and in well-developed cases lesions in all stages will be found. The lesions are slightly scaly from the commencement, and the furfuraceous desquamation continues until the faint mark left by the lesion disappears. Itching, usually slight in amount and only when the person is warm, is the only

[1] Ann. de derm. et de syph., 1887, viii., 615.

subjective symptom. Sometimes it is severe. The eruption is most marked upon the neck, infra- and supra-clavicular regions, sides of the chest, and shoulders; it may be marked also on the abdomen and buttocks. The whole body may be involved, but the hands and feet are usually spared, and it is uncommon on the face. After some three to six weeks the disease tends to spontaneous recovery, although it may last for two months.

ETIOLOGY. We know nothing about the cause of the disease. It affects all ages and both sexes. Crocker thinks that it is most common in children. Most of the cases I have seen have been in young adults. This difference may be accounted for by the fact that he has a large children's dispensary service. Some cases seem to be due to overheating of the skin by wearing too heavy underclothing. Hyde and Montgomery teach that it recurs most often in blond subjects who have been enfeebled by great physical fatigue or over-study in school. The disease seems to occur epidemically in some instances, and cases are apt to present themselves in groups. Contagion has not been established. Bazin regards it as arthritic. It may be parasitic, but as yet *the* parasite awaits demonstration. Vidal[1] describes a parasite that he names the *microsporon anomœon*, as found in pityriasis circiné et marginé, a disease probably the same as pityriasis rosea. Hebra regarded it as a manifestation of trichophytosis, and some authorities still think that some cases are diffused ringworm.

DIAGNOSIS. Pityriasis rosea must be differentiated from the early circinate, scaling, macular syphiloderm; annular psoriasis; seborrhœal eczema; and disseminated trichophytosis. The one most distinguishing feature of pityriasis rosea is the wrinkled old-parchment yellow of the center of the ring. This is absent from the lesions of all the other diseases with which it is likely to be confounded. The *syphilide* is of a less bright-red color, and there surely will be some other evidence of syphilis to guide us. *Psoriasis* is far more scaly; the scales are of a white color; the tips of the elbows and the anterior face of the knees will be specially affected; and typical psoriatic

[1] Ann. de derm. et de syph., 1882, iii., 22.

patches will be found somewhere. *Seborrhœal eczema* occurs upon the middle sternal and interscapular regions particularly; the patches have a greasy feel; the scales are thicker than in pityriasis rosea; and the lesions show little tendency to spontaneous involution. Cases occur in which it is very difficult to make the diagnosis between this and pityriasis rosea. In *trichophytosis* the fungus is readily found under the microscope, which is a decisive test. Apart from that, ringworm does not spread so rapidly nor involve such wide areas.

TREATMENT. Pityriasis rosea is a self-limited disease, and recovery is sure to take place in a short space of time. Though treatment seems not to have any marked effect on the disease, we may use lotions of salicylic acid, ten to twenty grains to the ounce, or of boric acid; or content ourselves by allaying the itching with lotions of carbolic acid (ten grains to the ounce), calamine, oxide of zinc, and the like. Tepid alkaline or bran baths may be used, followed by a dusting powder.

Pityriasis Rubra. See Dermatitis exfoliativa.

Pityriasis Rubra Pilaris. This disease was first described by the French writers. The following account is abstracted from an admirable paper by Besnier.[1]

It has been confused with lichen pilaris, psoriasis, lichen ruber and lichen planus, and pityriasis rubra. Several cases of lichen ruber reported in this country have been declared by the French to be cases of the disease under consideration, as well as the lichen psoriasis of Hutchinson. Kaposi regards it as the same as lichen ruber. It is probable that the two are identical.

SYMPTOMS. A typical case has three principal elements: 1. Asperities of the follicular orifices; 2. Desquamation; 3. Roughness of the skin with exaggeration of its folds. The disease generally begins suddenly, without prodroma, but there may be some malaise, nervousness, insomnia, hyperæsthesia of the finger-ends, formication, and the like. These prodromata are of short duration, and rarely cause the patient to go to bed. The uncovered

[1] Ann. de derm. et de syph., 1889, x., 253 et seq.

parts are usually first affected with the eruption, but it may appear primarily upon the trunk or extremities. The initial lesion may be a simple exfoliation; an erythema; a scaling erythema; a fine but scanty furfuraceous desquamation; a shiny redness with pityriasis; desquamation of nail-bed, or fragility of nail. However beginning, the more pronounced form appears in a certain number of days or weeks, and may develop or abort at any point, or be limited to any region, or involve the whole body. When fully developed, a patch or the whole skin, as the case may be, presents the following characteristics: It is covered with elevations that are generally conical, but may present great diversity of shape. They may be discrete or coalesce. They may be so small as to be seen only by the aid of a microscope, or elevated many millimeters above the surface, with corresponding diameter. They are scaly, and vary in color from a silver white or gray to a bright or opaque red, red brown, or rosy yellow. Their summits may be flat, uneven, cone-shaped, or truncated, giving issue to a hair broken off at a little distance above the surface of the skin, and, it may be, sheathed by a corneous or sebaceo-squamous case. Instead of a hair protruding, it may form only a small comedo-like spot at the center of the summit, or it may be wanting, or it may seem to exist alone, giving to the region the appearance of a badly shaven beard. Sometimes the cone presents a crater, at the bottom of which is a black point, a punctured scaly plate, or a psoriatic point. When several elevations coalesce their borders disappear and they form a squamous patch, showing the central points and the associated pilary cones. The skin is scaly, dry, hard, rough like a file, and presents a "goose-skin" appearance. The scales may be scraped off without any loss of blood. The disease is generally symmetrical, but the lesions may be disseminated without order, or in irregular lines, groups, or islands, or may unite in tessellated areas. The cone-like elevations do not occur on the scalp, and are rare on the soles and palms. In these locations the disease takes the form of abundant desquamation upon a reddened base. All other regions may be affected, the cones forming about

the follicles of the skin, especially about the hair follicles. The back of the phalanges of the fingers are nearly always affected, appearing rough, uneven, and covered with patches of characteristic papules. A favorite site is in the upper part of the internatal furrow. Some variations from the type are encountered in different regions, but characteristic types will be found somewhere on the body. The hair may fall, and the nails may be deformed, opaque, and raised by an accumulation of scales under them.

The general condition is unaltered, and little, if any, discomfort is experienced. The duration of the disease is indefinite, and relapses are the rule. Second and subsequent attacks may be shorter than the first.

ETIOLOGY. The etiology of the disease is obscure. It occurs at all ages, and in both sexes, but most often in infancy or youth, and in males. Many causes have been assigned to it, such as cold, excesses, rheumatism; but none of these can be definitely said to be *the* cause.

DIAGNOSIS. The disease is to be diagnosed from *ichthyosis* in not being congenital; in attacking by preference the joints, scalp, face, and neck; and in its spontaneous recovery for a time. From *dermatitis exfoliativa* by its benign course; its location about the follicular openings; and by the thick scaling of the palms and soles. From *lichen ruber* the diagnosis is difficult, the two being considered by many as identical. H. Hebra has made a careful study of the two diseases,[1] and we give here his table of differential diagnosis between them:

PITYRIASIS RUBRA PILARIS.	LICHEN RUBER ACUMINATUS.
1. Develops in the epidermis.	1. Develops in the cutis.
2. Efflorescences bear scales from the beginning, and often consist of accumulations of epidermic scales alone, which can readily be scratched off.	2. From the beginning they are smooth and glistening. Scales form only late in the disease.
3. Efflorescences limited to follicle mouths, especially those of hair follicles.	3. Are not limited to the follicle mouths.
4. Extensor surfaces of the extremities especially affected.	4. Flexor surfaces more affected than extensor surfaces.
5. Microscopically consists of thickening of the epidermis, with lengthening of the interpapillary projections of the rete mucosum in certain places.	5. Marked collections of round cells in the papillary layers of the corium.

[1] Monatshefte f. prakt. Dermat., 1889, x., 101.

Pityriasis Rubra Pilaris.	Lichen Ruber Acuminatus.
6. Color of efflorescences scarcely differs from that of the skin at the beginning. Afterward becomes rosy or brownish red from consecutive hyperæmia.	6. From beginning a bright red, becoming darker, and may change to deep rusty brown.
7. Roughness of the extensor surfaces of the extremities, and satin-like smoothness on the trunk, with fine scales.	7. Everywhere thickening and roughness of the skin, increasing with the age of the disease.
8. No accompanying subjective symptoms.	8. Unbearable itching, great burning, restlessness, and jerking movements of the limbs.
9. No implication of the general health.	9. Fever, œdema (especially of lower extremities), albuminuria, sleeplessness, general prostration, and loss of weight.
10. Spontaneous recovery, or chronicity without danger to the patient.	10. Often ends in death, always attended with marasmus.
11. Cured by purely local means, though often obstinate.	11. Cured, if at all, by constitutional treatment, as with arsenic. Unna's ointment of mercury and carbolic acid good.
12. Little or no pigmentation left.	12. Deep-brown, even blackish-brown, pigmentation left which may last for months.
13. Does not affect the mucous membranes.	13. Affects mucous membranes, especially of mouth and vagina.

Psoriasis at times bears a strong resemblance to pityriasis rubra pilaris, but it seeks the elbows and knees particularly; its scale is larger; and it is not a follicular disease, never presenting comedo-like plugs, broken-off hairs, or little elevations.

Treatment. No satisfactory treatment has been found, but the remedies applicable to psoriasis or to ichthyosis can be used with advantage. Like in that disease, an attack may be overcome, but no assurance can be given against a relapse. Thus far no fatal case has been reported.

Pityriasis Simplex. This form of scaling of the skin is most often seen on the scalp, where it is spoken of as *pityriasis capitis*, and constitutes that form of dandruff in which there is a more or less abundant scaling of the scalp. The hair is dry and unmanageable, and the head itches, especially when the patient sits under a light or becomes overheated. The patient is annoyed by the constant falling of the scales upon his clothing, and if the disease is very pronounced brushing of the hair causes a small snowstorm of white, light scales. The scalp usually looks pale, and will be found covered with fine, grayish

or yellowish, readily detachable scales. Sometimes there are more or less redness of the scalp and a seam of redness along the forehead. The eyebrows, bearded portion of the face, pubes, and other regions may be affected. After an indefinite time alopecia is apt to follow a pityriasis. This disease is usually classed under seborrhœa sicca. It is the slightest grade of seborrhœal eczema. It seems to be inflammatory in its nature. The treatment is the same as that for seborrhœal eczema and for seborrhœa.

Pityriasis Tabescentium is that condition occurring in marasmic individuals where there is scaling of the whole skin specially marked on the extensor surfaces of the extremities and trunk.

Pityriasis Versicolor. See Chromophytosis.

Plaques des Fumeurs. See Leucoplakia.

Plica Polonica. Synonyms: Trichosis plica; Trichoma; (Pol.) Koltun; (Ger.) Weichselzopf; (Fr.) Plique polonaise; Polish ringworm.

Symptoms. This is rather a condition than a disease, in which the hair of the head and other parts becomes matted together into variously shaped masses, on which rest all sorts of extraneous matters deposited from the air; and in which are harbored vast hordes of pediculi. Sometimes these matted tresses are near the scalp, and sometimes far away, according to circumstances, such as the growth of the hair and diseases of the scalp. Not infrequently an oozing eczema of the scalp will be found. The masses will assume all sorts of shapes, to which various names have been applied. An offensive odor often emanates from the scalp. Occurring among ignorant people, as is usually the case, these plicas are regarded with superstition. The patient and friends refuse to have them cut off lest some dire disease befall the bearer.

Etiology. The cause of the condition is want of cleanliness combined with an oozing dermatitis of the scalp due to pediculi or any other cause.

Treatment. The treatment consists in the liberal use

of soap and water, and curing the dermatitis. If allowed, the speediest way of beginning treatment is to cut off the hair. The patient must be instructed in the hygiene of the scalp.

Podelcoma. See Fungous foot of India.

Poils Accidentels. See Hypertrichosis.

Polytrichia. See Hypertrichosis.

Polyidrosis. See Hyperidrosis.

Polypapilloma Tropicum. See Yaws.

Pompholyx. Synonyms: Dysidrosis; Cheiro-pompholyx. This disease was first described by Tilbury Fox and Jonathan Hutchinson from the same case, though independently of each other. The former thought that it was due to distention of the sweat glands, and named it dysidrosis, while the latter named it cheiro-pompholyx from the bullous character of the eruption and its occurrence upon the hands. As it occurs upon the feet as well as the hands, Hutchinson's name is a misnomer.

SYMPTOMS. The first thing that the patient notices is a burning and itching of the palms or soles, and sides of the fingers or toes. In a few hours small, clear, sago-grain-like vesicles, sometimes grouped, and with an erythematous zone about them, appear in these locations. They are often very numerous, and some of them run together to form small and large bullæ. Their contents are at first clear and neutral; later they become turbid and have an alkaline reaction. These vesicles do not tend to spontaneous rupture. In a few days they dry up, their covers fall, and large and small, dry, red surfaces are left to mark their locations. If the lesions have been very numerous, the whole of the old skin may be shed. In slight cases the palms or soles will be dotted over with irregularly shaped red spots with ragged edges. As a rule, the back of the hands and feet are unaffected, though the rule has many exceptions. The patients are seldom in perfect health, and are usually nervously depressed. Hyperidrosis of the affected parts commonly accompanies or precedes

the outbreak, and sometimes a lichen tropicus will be found on the trunk. The duration of the attack varies from a few days to three or four weeks, and relapses in the same or following years are common. Most all cases are seen in the summer. It is usually symmetrical, though one side may be affected before the other.

ETIOLOGY. Over the causes of the disease there has been and still is active discussion. It seems to be in some way connected with the sweat glands, but whether it is a simple impediment to the escape of the sweat or an inflammatory disease is not determined. Some able pathologists ally the disease to herpes, and deny any connection with the sweat glands. The occurrence of the disease in hot weather points to the sweat apparatus as the organ at fault. There is probably a vasomotor neurosis at the bottom of the trouble. It affects all ages and both sexes, though most common in young adult women, and in those who are of nervous temperament or the subjects of worry and over-fatigue. It is said that organic or functional heart disease is the cause of some cases.

PATHOLOGY. Robinson, who has carefully studied this disease, regards it as a neurosis allied to herpes and pemphigus. He thinks that it has nothing to do with the sweat glands, but that it is inflammatory. The contents of the vesicles, he shows, is not sweat, but serum; and the reaction of the fluid is alkaline or neutral in its early stages, never acid. It also contains a large amount of albumin and some fibrin. It comes from the papillary blood vessels, and passing between the rete-cells collects in different situations in the stratum mucosum.

DIAGNOSIS. Pompholyx must be differentiated from eczema, scabies, pemphigus, and erythema bullosum. It differs from *eczema* in its vesicles not tending to break down of themselves; in not presenting a moist surface after the vesicle tops fall; and in running a more definite course. The sago-grain-like appearance of the vesicles is not peculiar to it, as it is frequently seen in eczema of the hands, and is due to the thickness of the epithelium preventing the ready escape of the fluid. *Scabies* may bear a close resemblance to pompholyx, but can be readily dif-

ferentiated by finding the burrows, and by the presence of the eruption at the same time upon the anterior face of the wrists, the breasts in women, the genitals in males, and about the umbilicus in both sexes. *Pemphigus* of the hands and feet is exceedingly rare in adults, and pompholyx has never been reported in infants. Moreover, pemphigus lacks the vesicular lesions of the sides of the fingers. *Erythema bullosum* is always on the back of the hands, and is not itchy, though it may burn.

TREATMENT. A simple astringent ointment, as of oxide of zinc, or diachylon; or one of the oleate of zinc or lead; or an alkaline lotion, will allay the irritation and hasten the disappearance of the disease. General hygiene should be enforced; and tonics of iron, arsenic, or whatever seems indicated by the condition of the patient, given.

Porcellanfriessel. See Urticaria.

Porcupine Disease. See Ichthyosis.

Porrigo Contagiosa. See Impetigo contagiosa.

Porrigo Decalvans. See Alopecia areata.

Porrigo Favosa. See Favus.

Porrigo Furfurans. See Trichophytosis capitis.

Porrigo Granulé. See Pediculosis.

Porrigo Larvalis. See Impetigo.

Porrigo Lupinosa. See Favus.

Porokeratosis. Synonyms: Hyperkeratosis atrophica seu excentrica.

Under this name Mibelli,[1] and later Respighi,[2] have reported a disease of the skin that occurs in the form of raised or sunken patches of various sizes and irregular shape, with a continuous thin, horny, linearform ridge about them. The skin inside of the border may be normal, rugous, smooth, scaly, or atrophic, while around the patches it may be normal, hyperæmic, or pigmented. The disease

[1] Monatshefte f. prakt. Dermat., 1893, xvii., 417.
[2] Ibid., 1894, xviii., 70.

occurs on the dorsal surface of the hands and feet, the extensor surface of the forearm and leg, and exceptionally on their flexor surface. It may also occur on the face, neck, and scalp, and the mucous membrane of the mouth. In the mouth the lesions vary from small pinhead to large lentil in size. They are sharply limited, with a linear white, opaque border enclosing an opaline area that may

FIG. 58.

Porokeratosis. (RESPIGHI.)

be raised or flattened, convex or concave, or atrophic. There are no subjective symptoms. Some of the lesions may disappear spontaneously. Generally the disease spreads slowly so as to occupy large areas.

Respighi describes five distinct forms: 1. Miliary and submiliary papules; 2. Hemp-seed- to lentil-sized papules; 3. Guttate to nummular papules; 4. Ring and circinate

disks, which is the most common form. Their edges are raised, regular, toothed, or zig-zag, and may be composed of papules arranged in chains. The disks may be round, oval, or elliptic; 5. Ball-shaped lesions three to four millimeters high. All forms begin as papules. The disease is bilateral and tends to symmetry. The nails may be affected, becoming cloudy, striped longitudinally, rough, thickened, raised from their bed, brittle, and they may be shed.

The disease usually begins in early life, but may begin at any age. It is hereditary in some families. Most of the cases are in men. Many members of the same family may be affected. It consists in a hyperkeratosis of the sweat gland orifices, and destroys both the glands and hair follicles. It is thought by Mibelli to be a species of papilloma lineare.

The TREATMENT consists in destruction by electrolysis or in excision.

Port-wine Mark. See Nævus.

Post-mortem Warts. See Tuberculosis verrucosa cutis.

Prairie Itch. This disease has been found to be in most cases a combination of pruritus hiemalis and scabies. It is not a disease *sui generis*.

Prickly Heat. See Miliaria.

Prurigo. Synonyms: Strophulus prurigineux; Scrofulide boutonneuse bénigne; (Ger.) Juckblattern.

A chronic disease of the skin characterized by beginning in infancy as an urticaria, and changing into a recurring eruption of pale, hard, exceedingly itchy, discrete papules, especially upon the extensor surfaces of the extremities. It increases in severity from above downward, and is accompanied by enlargement of the inguinal glands.

There are two types of this disease, namely, prurigo mitis and prurigo ferox. These blend into each other. While the malady is more commonly reported from Vienna than elsewhere, it occurs in many countries. It is rare in this country, and most of the cases met with are of

the mild type. The name is used by most French writers as synonymous with pruritus, and English writers quite commonly speak of "pruriginous" diseases when confusion would be avoided by using the adjective "pruritic."

Symptoms. The disease begins in infancy, quite commonly toward the end of the first year, as an outbreak of urticarial wheals of various sizes and shapes. The urticarial eruption persists, but after a time a preponderance of small wheals will be remarked, and a preference for the trunk and the extensor surfaces of the limbs. During the second or third year the urticarial element is lost, and the characteristic papular eruption gradually preponderates, and at last takes its place. The papules are pinhead to hemp-seed in size, flat, firm, of the color of the skin, or of a bright-red, rosy, or yellowish-white color, and in many cases so little raised as to be felt rather than seen. When the skin is irritated the papules may assume the character of small wheals. The efflorescences are located principally upon the extensor surfaces of the limbs, and more sparsely on the trunk, while the scalp, the flexures of the large joints, the palms, soles, and genitals are free. The papules are not grouped.

Pruritus is intense, so that excoriations and torn papules are present over all the affected parts. The patients have a pale, weary expression of countenance, and evidently are in poor condition. The skin is often dry and it may be scaly.

When the lesions are but few in number and scattered about upon the extremities we have *prurigo mitis*. When a great number of papules are present, and the disease is widespread, we have *prurigo ferox*. Now we have the typical form of the disease such as is shown in the Vienna skin clinics. We note that the skin feels rough; that it is strewn over with a great number of small papules which are of the color of the skin or pale red; defaced with scratch-marks; eczematous in places; darkly pigmented, it may be brown, from constant irritation of the scratching, and that the color of the general integument is in strong contrast with the pale color of the face; that the skin is thickened in some places, while the flexures of the

joints are free from change and as soft as normal; that these changes in the skin are progressively worse from above downward, so that the legs from the knees down are most markedly involved; and that the inguinal glands are enlarged so as to form buboes. Ecthymatous lesions may arise. The intensity of the itching may be so great as to prevent sleep, and even in some cases to drive the patient insane.

The duration of the disease is indefinite; it may last a lifetime, but often tends to disappear with advancing years. The type of the disease remains the same throughout—that is, prurigo mitis does not change to prurigo ferox.

Etiology. Prurigo affects both sexes, though it is more prevalent in the male sex. It is far more common among the poor and those who are uncleanly. It is not uncommon to find several members of the same family with the disease. A phthisical family history has been affirmed to be an etiological factor by some authorities. Some cases are better in winter and some in summer. It is a disease of infancy continuing through life. It seems to be related to urticaria. A neurosis probably is the underlying cause of the phenomena. Histological studies have not yet put the disease upon a sure anatomical basis.

Diagnosis. The diagnosis is made by the occurrence of pale papules upon the extensor aspects of the limbs; by the increasing severity of the symptoms from above downward; by the enlargement of the inguinal glands, by the peculiar look and complexion of the patient, and by the continuance of the disease from early infancy. It is differentiated from *eczema* by the sparing of the flexures of the joints; by the presence of its characteristic papules, and by its greater obstinacy. From papular *urticaria* it can be distinguished only by its general course. In fact, a doubtful case must be carefully studied over a considerable length of time before a positive diagnosis can be made. *Scabies* and *pediculosis* can be readily separated by the occurrence of the lesions on the palms, between the fingers, and on the genitals in the one; and the

parallel scratch-marks over the shoulders in the other. *Ichthyosis* spares the flexures as does prurigo, but it is marked by polygonal scales, not papules; and is free from the great number of excoriations found in prurigo; it is, moreover, a disease that affects the whole body-surface more generally.

TREATMENT. The disease is exceedingly obstinate to treatment. The patient must be put in as good a physical condition as possible by means of hygiene, cod-liver oil, iron, and a good diet. Tincture of cannabis indica is commended by Crocker for relief of the itching in doses of ten minims increased to thirty minims to a ten-year-old child, given three times a day directly after meals, and intermitted for two weeks after every six weeks. These seem to me to be large doses. Simon[1] and others recommend pilocarpine hypodermically, fifteen minims of a two per cent. solution once a day, for adults, or a corresponding quantity of jaborandi by the mouth. After the dose the patient is to be put in bed and covered with woollen blankets, where he is allowed to sweat for two or three hours. Carbolic acid, fifteen to twenty grains a day in pill, and the bromide of potassium have their advocates. Antipyrine and phenacetine exert a controlling influence over pruritus, and they are among the most valuable internal remedies in prurigo. The latter, though not so active as the former, should be tried first in full doses, as it is much safer.

External treatment is very important. Naphtol is most highly commended, a two to five per cent. solution, according to age, being rubbed in every night, and a bath of naphtol-sulphur soap being taken every second night. In older children and adults the soap treatment of Hebra, as described in the section on Eczema, is useful. Sulphur ointment used as in scabies after a daily bath; tar used as in psoriasis; a five or ten per cent. lotion of carbolic or salicylic acid, or the same combined with vaseline; a five per cent. boric acid ointment, all have their advocates, and all may be tried in obstinate cases. Baths followed by inunctions of cod-liver oil, simple oil, tar oil, or lard, are

[1] Berlin. klin. Wochenschr., 1879, xvi., 721.

often useful; as well as baths of alum, soda, and corrosive sublimate. Jacquet and Tenneson report great amelioration from wrapping the affected parts in some protective dressing, such as rubber sheeting or absorbent cotton. The spinal douche might do good in some cases. Treatment should be continued for weeks or months after apparent cure of the disease.

The PROGNOSIS as to cure is bad, excepting in recent and not severe cases. These may be cured. As a rule, all we can do is to mitigate the patient's discomfort. Relapses are the rule.

Pruritus Cutaneus. Itching of the skin is a symptom common to a great variety of dermatoses. Indeed, it has been said that skin diseases might be classified under two divisions: those that itch and those that do not itch. Eczema, scabies, urticaria, prurigo, pediculosis, are all eminently pruritic, but do not concern us here.

SYMPTOMS. By pruritus cutaneus we mean a functional neurosis of the skin whose only essential symptom is itching. This induces scratching, and scratch-marks are always to be found as a secondary symptom. These usually are in the form of scratched papules. If the itching is great and continuous, we will have other secondary effects, such as thickening and pigmentation of the skin, and eczema of various degrees.

The itching varies greatly in degree, from simply an occasional slight attack to such an intensity as to render the patient's life unendurable and tempt to suicide. The pruritus is commonly paroxysmal, but in some cases the pauses between the paroxysms are so short that the itching is practically continuous. It is almost always worse at night, and robs the sufferer of sleep. Changes of temperature aggravate the itching, as a rule. Very commonly warmth makes matters worse, and the sufferer will begin to scratch and keep on scratching while in the neighborhood of a fire or in bed warmly covered. He cannot resist the impulse to scratch, and so in bad cases he shuns society and becomes morbid.

Under the general title of pruritus are often placed

various paræsthesiæ, such as formication, tingling, and burning.

The pruritus may be general or local. Thus we have *pruritus universalis*, a term that is rarely to be applied with strict accuracy, as it is seldom universal, but only general. In these cases the itching is now in one place and now in another. Bulkley,[1] by a series of observations on himself, strove to establish some law of reflex excitation, in which he was so far successful as to find that if he scratched one spot that itched, he relieved the sensation there, only to have it break out elsewhere. This general pruritus is most often encountered in *pruritus senilis*, or the itching of the skin of old people, and in *pruritus hiemalis* and *pruritus æstivalis*, which are induced respectively by the cold of winter or the heat of summer. These very often manifest themselves on the thighs and legs only.

Of local pruritus we have many instances. Thus we have *pruritus ani*, which afflicts both sexes, though more often men than women, and in which the itching extends to the mucous membrane of the anus. This same extension is also seen in *pruritus vulvæ*. This localized itching, with the corresponding *pruritus scroti* in men, often occurs in connection with pruritus ani. In all these three the parts almost always become thickened and eczematous from the constant rubbing and scratching to which they are subjected, and nymphomania is sometimes a consequence of the itching vulva. The scalp, face, especially about the nose and mouth; the palms and soles, and between the fingers and toes, are frequent sites of itching. More rarely local areas anywhere will be affected with recurring attacks of itching.

Etiology. That the pruritus is due to a functional disturbance of the sensory nerves there is no doubt. For success in treatment and accuracy in prognosis it is necessary for us to endeavor to determine the cause of such disturbance. Hepatic derangements cause a certain proportion of cases. The intense itching of the skin in jaundice is evidence of this. Digestive disorders and constipation; excretory disorders, as of the kidneys and skin; albumin-

[1] Journ. Cutan. and Gen.-Urin. Dis., 1887, v., 459.

uria; lithæmia; and diabetes, all have influence in causing pruritus. Depressed mental states, and the disorders of the nervous system induced by the abuse of tobacco, tea, alcohol, opium, and the like, produce pruritus. Reflex influences from the sexual sphere and the power of imagination are responsible for some cases. In illustration of the latter everyone knows how many people will begin to scratch when the subject of lice is mentioned; and how that long after the acarus is killed in scabies the patient will continue to complain of itching, and will not be assured that he is cured of his disease.

In pruritus senilis the skin will be found to be atrophied and the fatty tissue underlying it absorbed in not a few cases. Pruritus ani is often due to hæmorrhoids or fissures of the mucous membrane; or to ascarides; or to the excessive use of tobacco, as well as to the causes enumerated above. Stricture of the urethra has been found to be the cause of both it and pruritus scroti. Pruritus vulvæ is very often due to pregnancy or tumors of the uterus or ovaries. In this form diabetes is quite commonly the cause. Pruritus hiemalis begins at any time from October to January, and continues until the spring is well advanced. The effect of cold upon the skin seems to check the secretory functions.

Bulkley has found pruritus to be more common in men than in women, fifty of his eighty cases being men. In some families an itching skin seems to be hereditary.

Diagnosis. If we bear in mind that pruritus has no lesion of its own; and if, whenever a patient complains of itching of the skin, we institute a search for the pediculus, or the itch-mite, or their lesions; or the wheal, or at least a history of it; and find none, then we have by elimination gone far toward establishing a diagnosis of pruritus. Sometimes it is difficult to determine whether an eczema is secondary to the scratching for the relief of itching, or the itching is a part of the eczema. Only an attempt at curing the eczema and long observation of the case will enable us to make a true diagnosis. Many errors of diagnosis will be changed by close study, as true pruri-

tus is not so common as other itching diseases. Bulkley found but eighty cases in 5000 private cases.

TREATMENT. To find and remove the cause is the first essential in treating a case. How difficult this task may be will be seen by a study of its etiology. Nevertheless, the patient must be considered, and every organ interrogated, and any deranged function regulated as far as possible. Tea, coffee, and tobacco should be interdicted; a dietary carefully laid down; and the rules of hygiene, such as those relating to exercise, bathing, and clothing, enforced. To relieve the itching as such, we may give the tincture of cannabis indica, ten minims three times a day, in water after meals, and gradually increase the dose up to twenty or thirty minims; or the tincture of gelsemium in ten-minim doses every half-hour till one drachm is taken or toxic effects produced; hypodermic injections of pilocarpine, one-tenth to one-eighth of a grain; quinine, ten to fifteen grains at bedtime; carbolic acid, one to two minims three times a day; wine of antimony, five to seven drops after meals; salicylate of soda, fifteen grains, or antipyrine or phenacetine in full doses. Besnier recommends valerian, or valerianate of ammonium. But the relief so obtained is transitory, and we should not rest content until we have found out, and where possible removed, the internal underlying cause. Opium should never be given, as it causes pruritus.

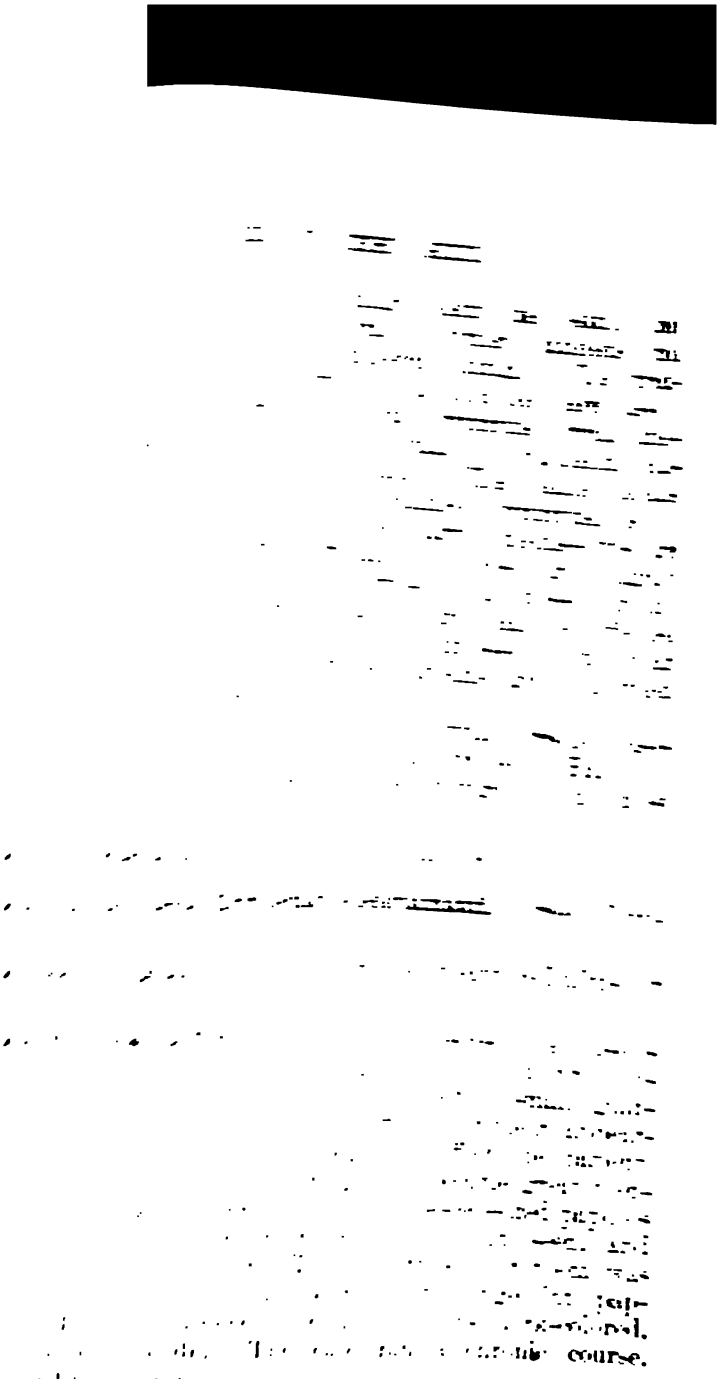
The external treatment is of great service in alleviating the itching, even if it does not cure the disease. For this purpose general baths with soda (℥viij–x to thirty gallons), or nitric or hydrochloric acid (℥j to thirty gallons), may be used. After the bath the body is to be dried by wrapping in a warmed sheet and patting the skin dry; then the skin should be smeared with vaseline and powdered with cornstarch from a flour-dredger. For local pruritus we may use lotions, of which one of the most efficient is:

℞	Acid. carbol.,	℥i–ij;	12–25	
	Liq. potassæ,	℥j;	12	
	Ol. lini.,	ad ℥j;	100	
Sig. Shake before using (Bonson).				M.

The patient should be cautioned to tap the skin gently with this, and not rub it in. So used, it will cause no damage and will stop the itching for hours. Carbolic acid may be used as a spray in the strength of half an ounce to the pint of water with one ounce of glycerin. To this five to twenty minims of oil of peppermint may be added (Hardaway). Alkaline lotions, as bicarbonate of soda, ʒj to the basinful of water; or acid lotions, such as vinegar dabbed on the itching spot, will often relieve. Liquor carbonis detergens, ʒj to ʒiv; thymol, ʒij; liquor potassii, ʒj; glycerin, ʒiij; aquæ, ℥viij (Crocker). Liquor picis alkalinus, ʒj to ʒiv; perchloride of mercury, gr. ½–3 to ʒj of water. All these are well attested as useful. Peroxide of hydrogen is highly commended by Bronson. It may be used as a toilet wash two or three times a day.

For pruritus ani, scroti, et vulvæ, sitting over a basin or pail of very hot water and sopping it up on the parts, followed by patting the skin dry and using a starch powder, will often give the patient a quiet night. If an eczema is present, that must first be cured. Cocaine lotions, as one of twenty per cent. of cocaine and five per cent. of glycerin; or menthol three to ten per cent. in oil of sweet almonds, or of glycerin and water; and carbolic acid lotions are also useful, as well as many mercurial ointments. Cocaine had best be left alone, as there is always danger of forming the cocaine-habit from the use of this seductive drug. Bulkley's antipruritic powder, of one drachm each of camphor and chloral, rubbed together till liquefied, and added to one ounce of starch powder, will sometimes prove very effective. Painting the parts with nitrate of silver, gr. xvj in spts. ætheris nitrosi ʒj, is another good proceeding. A saturated solution of boric acid is also good. When the parts are excoriated neither menthol, peppermint, nor the chloral-camphor powder can be used. Guaiacol, five or ten per cent. with starch powder, is one of the newer remedies. Suppositories containing belladonna, cocaine, or creosote may give relief in these cases. Of course, hæmorrhoids, fissures, or other rectal diseases must be cured if found.

In pruritus hiemalis it is sometimes necessary for the



Pseudo-lupus. See Dermatitis blastomycotica.

Psora. See Psoriasis.

Psoriasis. Synonyms: Lepra; Lepra alphos; Alphos; Psora; (Ger.) Schuppenflechte.

A disease of the skin characterized by an eruption of round or oval, bright-red patches covered with more or less thick, silvery-white, adherent scales; by occurring especially upon the extensor surfaces of the elbows, knees, and extremities, and upon the scalp; by running a chronic course marked by remissions and relapses; and by being more or less pruritic.

This is one of the more common skin diseases, forming in this country about three per cent. of all cases.

Symptoms. Its features of variously sized, sharply defined red papules or patches covered with more or less abundant silvery-white scales that occur specially upon the extensor surfaces of the elbows and knees, are so pronounced that the disease once seen is readily recognized even by the tyro.

The primary lesion of psoriasis is always a rather bright-red, pinhead-sized papule covered with a dry silvery-white or grayish scale. It is rare to meet with a case in which these small lesions are seen alone, and when it is, it is called *psoriasis punctata*. Careful search of any but an inveterate case will be rewarded by finding these lesions somewhere on the body. They soon begin to enlarge by peripheral extension into larger patches, which have received various names, although all the same disease. When they attain the diameter of about one-quarter of an inch, and bear a rather thick scale, they look like drops of mortar, and the case is then spoken of as *psoriasis guttata*. When the lesions form coin-sized patches we speak of *psoriasis nummularis*. A single patch may grow to be two inches in diameter, or even larger, and preserve its circular shape. But the large patches are usually formed by the coalescence of several smaller patches, and may attain to a size sufficient to cover the greater part of a limb or even the trunk. Its circular outline is now lost, and the patch has a more or less scalloped,

indented border bearing so strong a resemblance to the maps drawn by children that Piffard suggested the term *psoriasis geographica* for it; but the more usual name is *psoriasis diffusa*. After a patch has reached a certain size it may clear up in the center and form a ring, and in this way we have *psoriasis circinata*. Several of these rings

FIG. 59.

Psoriasis. (From Prof. G. H. Fox's service in the Vanderbilt Clinic.)

may meet at their circumference, when the points of contact will disappear and gyrate figures will be formed. When the eruption is so general as to involve the whole or the greater part of the body, we speak of it as *psoriasis universalis*. Not infrequently these cases bear a striking resemblance to dermatitis exfoliativa.

Every case of psoriasis does not exhibit all these varieties, because the disease may stop short at any period of its evolution. But in any case there is apt to be a number of variously sized lesions. Whatever the size of the patch may be, it will always be observed that the redness extends a little beyond the scales. The amount of the scaling will vary. Sometimes the scaling will be but slight; sometimes it will be so abundant that it will heap up into such crust-like masses as to suggest the adjective *rupioide*. The scales are constantly being shed, and as constantly renewed. They may be readily scraped off with the nail; and if this is carefully done, a delicate glistening membrane will be exposed, under which will appear dot-like red points. That is, we have removed the epidermis and exposed the mucous layer of the skin, the red points being the tops of the slings of blood vessels of the papillæ. This is thought by some to be characteristic of psoriasis, but with care it may be produced in other diseases.

The color of the scales is silvery white or grayish. Darker scales are due either to the deposition of dust or the admixture of blood. The color of the patch will vary from a pinkish red to a dark red, the darker color being seen upon the legs, where the color of all lesions is darker on account of the partial stasis in the return flow of blood. The disease is always a dry one, there being absolutely no discharge feature in its course. The patches are sharply defined, but so little raised that they can be nearly all scratched away.

While psoriasis may occur anywhere on the body, and, as we have seen, may become universal, its most frequent locations are the extensor surfaces of the limbs, elbows, and knees, or rather the face of the tibiæ just below the knee, and the scalp. It may occur upon the first two locations alone. When it occurs on the scalp careful examination will generally show some lesion elsewhere on the body, and we will usually find a little patch in front of the ears, and very often there will be a red scaly line on the forehead just in front of the hair-line, a feature that is as striking and as characteristic of psoriasis as the corona veneris is

of syphilis. The hair does not fall, as a rule. In some cases, however, we may have transient or permanent alopecia. The whole scalp may be covered with a continuous patch, or distinct scaly patches may form as on the body. In any event the border of the patch will be sharply defined.

FIG. 60.

Psoriasis. (From Prof. G. H. Fox's service in the Vanderbilt Clinic.)

The palms and soles are very rarely the seat of the disease, and then only as part of general psoriasis. It is true that a few cases have been reported in which it has been said even to be located upon one hand alone, and this by competent observers; but the probabilities are all in favor of such cases having been either syphilis, which

is most likely, or squamous eczema. The disease is bilateral, and sometimes may show a decided tendency to symmetry.

In old, inveterate cases there may be considerable thickening of the skin, a feature that is usually wanting, and fissures may form about the joints that may be painful and bleed. This may also occur on the scrotum, or on the trunk where the skin is in folds.

The nails are affected in some cases, becoming opaque, lusterless, furrowed transversely, discolored, and sometimes cracked; while they are raised from their beds by the accumulation of scales underneath them. All the nails are rarely diseased at the same time; usually it is but one or two nails on each hand or foot. Sometimes the disease is limited to a strip along the side of one nail.

There is no constitutional disturbance in this disease, the patients usually being in as good health as the majority of mankind. Sometimes they have pains in the joints that are regarded as rheumatic by some, and as neurotic by others. Itching is very often an annoying symptom. Sometimes it is entirely wanting.

The course of the disease is variable. Although it is always chronic, it presents at times acute symptoms. Relapses are the rule, to which there are few exceptions. In some cases the skin will be entirely free from all trace of the disease for months or years. In most cases this freedom is only partial; even though the patient thinks he is clean, some little spot will be discoverable. The duration of each patch is also variable. It may disappear in a few weeks or remain for months. Most cases are better in summer, to become worse in winter. When the patches disappear, they do so completely, though a slight amount of scaling may be present for a short time. In a few very rare cases a chronic psoriatic patch has become papillomatous and then epitheliomatous.

Etiology. Various theories have been advanced in the etiology of psoriasis, and some facts have been established by our study. We know that the disease is hereditary in a number of cases. Greenough[1] found the pro-

[1] Boston Med. and Surg. Journ., 1885, cxiii., 163.

portion as high as one-third. It may occur at any age. Kaposi has reported a case at eight months of age, and Riehl[1] one at thirty-eight days. It usually is a disease of early adult life, making its first appearance before the thirtieth year. It is rare after the fiftieth year. It affects both sexes and all conditions of life. These things we know.

While the majority of patients seem to be in the best of health, some are rheumatic or gouty. In some cases there will be an unusual amount of indican in the urine. A lowered condition of the general health seems, in some cases, to favor an outbreak either of a primary attack or of a relapse. Thus it is no uncommon thing to see the disease in women grow worse during pregnancy or lactation. Mala-similation or digestive disorders also seem to aggravate or provoke the disease, Hardaway even affirming that he has known the inordinate eating of oatmeal to cause the disease, while Gowers[2] reports cases produced by the ingestion of borax as a medicine. Pototebnoff[3] has written an elaborate thesis to show that the disease is a vasomotor neurosis, affirming that in a majority of cases there will be found evidences of either trophic or vasomotor disturbances, or a history of more or less profound nervous troubles either in the patient or his family. A number of cases following fright or nerve-shock have been reported. In the *Vierteljahr. f. Derm. u. Syph.* for 1878, Lang brought out his parasitic theory, and in No. 208 of Volkmann's *Sammlung klin. Vorträge* the thesis is further elaborated, the fungus being represented by illustrations. He has found some support from other observers, but the theory has not gained general credence.

It is a well-known fact that an injury to the skin of a psoriatic, such as a pin-scratch, will determine the location of a patch of psoriasis.

Pathology. Pathologists by no means agree in their teachings as to the histology of psoriasis. By some it is regarded as inflammatory, while others believe it to be a

[1] Monatshefte f. prakt. Dermat., 1895, xxi., 283.
[2] Lancet, October 24, 1884.
[3] Monatshefte f. prakt. Dermat., 1891, Erganzungsheft, No. 1.

keratolysis, or an anomaly of cornification in which an imperfect corneous layer is formed. Some teach that the process begins in the rete, and the changes in the corium are secondary; while others hold the reverse view. Lang names his parasite *epidermidophyton*, and describes it as composed of mycelia and spores, either disseminated or in groups, which are so delicate as to be seen only with very high powers.

DIAGNOSIS. A typical case of psoriasis presenting round or oval, variously sized, pinkish-red, dry patches covered with thick silvery-white scales, scattered more or less generally over the body, but showing a marked preference for the extensor surfaces of the extremities, and especially of the elbows and knees, is readily recognized. In some less typical cases it needs to be differentiated from syphilis, eczema, seborrhœa, dermatitis exfoliativa, lichen ruber, and lichen planus, seborrhœal eczema, and possibly from lupus erythematosus. From the *papulo-squamous syphilide* of the secondary stage of the disease it differs by showing preference for the extensor surfaces of the limbs and the posterior surface of the trunk, though there are many exceptions to this rule. The syphilide is not so scaly; its red is darker, more raw-ham-colored; the lesions are more infiltrated, giving a more shotty feeling to the finger; they do not itch; they run a more acute course, and are of more uniform size, never exhibiting the patchy character of psoriasis. It is usually easy to establish the presence of other manifestations of syphilis, such as sore-throat, pains in the bones, fall of the hair, and perhaps the remains of the initial lesion. The late scaly syphilide is never general; is unsymmetrical, usually consisting of one or two groups of lesions that show no tendency to affect the elbows and knees. The lesions are more raised and prone to leave scars. There will also be the history of past syphilides to guide us, and an absence of those relapses so common and characteristic of psoriasis.

Eczema squamosum is far more pruritic than psoriasis usually is; the patch is more infiltrated; the scaling is less, the scales being thinner; exudation can be readily induced; and a history of moisture at some time will be

found. The patch of eczema is generally less sharply defined, and is more apt to shade off into the surrounding skin. If the scales of a psoriatic patch are removed, a delicate membrane is left showing red dots—the tops of the blood vessel slings in the papillæ; if the same thing is done in eczema, a discharging surface will be left.

Seborrhœa may simulate a psoriasis when it occurs in patches on the chest or as thick crusts on the scalp. The patches on the chest have a more yellow color and their scales a more greasy feel than is the case in psoriasis. On the scalp the crusting of seborrhœa does not occur in such sharply defined patches, and its crusts are very greasy. In either case, if it be one of psoriasis, we will be sure to find one or more typical lesions somewhere on the trunk.

It is quite impossible to differentiate a true case of *dermatitis exfoliativa* at first sight from one of general psoriasis. If it does arise from psoriasis, there will be a history of its gradual spread from typical lesions, quite different from what obtains in true dermatitis exfoliativa, which is more rapid in its evolution. Psoriasis is rarely so absolutely universal as is dermatitis exfoliativa. Watching the case for a time will establish the diagnosis. If psoriasis is the malady, it will declare itself after a time by the diffused redness clearing up and typical psoriatic patches showing themselves.

Lichen ruber presents small, pointed papules upon the trunk at first, and not the large scaling papules upon the extensor surfaces of the limbs of psoriasis. When the disease becomes general we will have the history of these lesions, and the skin will be more thickened and rugose.

Lichen planus occurs by preference on the flexor rather than the extensor aspects of the limbs, and in the form of flat, shining, angular, smooth papules, rather than of round, freely scaly ones. The color of its patches is violaceous and not bright red. If it becomes universal, it does so evidently by the springing up of new small lesions between the old ones, and not by the peripheral growth and coalescence of those already existing. The thickening of the skin is also much greater than in psoriasis.

In the diagnosis from *seborrhœal eczema* Unna lays great

stress upon four points: 1. Seborrhœal eczema spreads from above downward, mostly in the middle line of the body, and its lesions are quite stationary in character; while psoriasis begins on the elbows and knees, and more speedily affects the whole body. 2. There is always a history of a seborrhœal affection of the scalp in seborrhœal eczema. 3. The scales of seborrhœal eczema are fatty and crumbling, and the patches are yellowish; in psoriasis the scales are white and friable, not greasy, and the patches are bright red. 4. The proneness of the patches of seborrhœal eczema to form bow-shaped figures, or rings more or less broken. Psoriasis may be circinate, but the margins of the figures are not so narrow and not follicular as they may be in seborrhœal eczema.

TREATMENT. Though external treatment alone will remove the evidences of psoriasis upon the skin, producing a cure of the disease—if that may be said of a disease that is almost sure to relapse—we generally can procure more prompt results by a combination of internal and external remedies. The first inquiry in all cases should be made as to the general condition of the patient, and we should endeavor to establish in him as perfect a state of health as is possible. A restricted diet certainly does have a good deal of influence in causing an amelioration of the disease. No hard-and-fast lines can be set in this respect. In the service of Prof. George Henry Fox, who is a strong advocate of dieting in skin diseases, I have seen some patients improve under a strictly vegetable diet, and others do equally well on a dietary composed largely of milk and animal food. A stout, evidently overfed, plethoric patient will be benefited by cutting off all, or nearly all, meat. In this class of patients it is a good plan to insist upon a milk diet for a few days. An anæmic, underfed patient will, on the other hand, improve under a more liberal dietary. Alcoholics, and especially malt liquors, should be interdicted in all cases, as well as rich gravies and highly spiced foods.

Besides these general measures we have a number of drugs that have gained a more or less well-earned reputa-

tion as remedies for psoriasis, though it must be confessed that they are more or less empirical remedies.

Arsenic would be named, without doubt, by most general practitioners as *the* remedy for psoriasis. It does do good in this disease, but at the same time it is not to be considered as a true specific. In acute cases it aggravates the disease and should never be given. In chronic cases that have proved very stubborn it may be tried, and sometimes it will produce a speedy cure. The vast majority of cases will do quite as well without it. It may be given in the form of Fowler's solution with or without the wine of iron, and administered in water three times a day after meals. The initial dose for an adult should be about three drops, and the amount should be gradually increased until the limit of toleration is reached. Crocker thinks that the efficiency of this form of arsenic is enhanced by the addition of half a drachm of the tincture of lupulus to each dose. The Asiatic pill is the favorite mode of using arsenic in Vienna. It is composed, according to Kaposi, of—

℞	Pulv. ac. arseniosi,	gr. xj;	75
	Pulv. piperis nigræ,	ʒiss;	6
	Gummi acaciæ,	gr. xxij;	1 50
	Pulv. althæ. rad.,	gr. xxx;	2
	Aquæ,	q. s.;	q. s. M.
	Div. in pil. No. c.		

One pill is given after meals, and the dose is increased gradually every four or five days until ten or twelve are taken a day, unless some constitutional disturbance is caused before then. The method of increase is by first giving one pill after each meal; then two pills after breakfast, and one after the other two meals; and then two after breakfast, two after the midday meal, and one in the evening, and so on. Or we may make use of the tablet triturates of arsenious acid with piperina, giving those containing one-twentieth of a grain of the arsenic in the same manner as the Asiatic pills. Any other preparation of arsenic may be used. Hypodermic injections of arsenic have been employed with success, but it would be hard to induce an American patient to endure this method. The

administration of the drug must be persisted in for a long time, and it may prove curative by itself.

Alkalies that act as diuretics are often very helpful, quite apart from any indication for their use on account of gout or rheumatism. A beginning psoriasis, or even a case of some duration, will be favorably influenced by the administration of the acetate or citrate of potassium in fifteen-grain doses before meals, well diluted, and followed by drinking half a glass of water. The undoubted efficacy of large doses of the iodide of potassium, as recommended by Haslund,[1] may depend, in part at least, upon its diuretic action. He gives the salt in increasing doses, so that as much as six hundred grains have been administered to one patient during the day. When assistant physician to the New York Skin and Cancer Hospital, in Dr. G. H. Fox's division, I tried Haslund's plan in several cases. They certainly were greatly benefited. The objections to this method are the expense of the drug and the danger of the sudden production of poisoning, shown by palpitation of the heart, severe headache, and faintness, and necessitating either the keeping of the patient in a hospital or under the constant attendance of a physician.

Turpentine oil is highly commended by Crocker as follows: It may be given in capsule, or, preferably, as an emulsion rubbed up with mucilage of acacia. The initial dose is ten minims three times a day after meals. It may be increased by five or ten minims at a dose until the patient, if tolerant of it, is taking thirty minims three times a day. Barley-water must be freely drunk during the day to prevent any bad effect on the kidneys, and the last dose of the turpentine should be taken not later than six or seven o'clock in the evening. Dyspepsia and irritability of the urinary organs contraindicate its use. The same authority advocates the use of salicylate of soda in fifteen-grain doses three times a day after meals, or salicin.

The wine of antimony in five- to ten-minim doses is recommended by Mr. Malcolm Morris as efficacious in acute cases. Hyde speaks well of the protiodide of mercury, one-fifth grain three times a day. I have seen benefit in

[1] Vierteljahr. f. Derm. u. Syph., 1887, xiv., 677.

some cases from the use of intestinal antiseptics, such as salicylic acid and salol.

Chrysarobin by the mouth, one-sixth of a grain in sugar of milk three times a day, and increased to one or two grains at a dose, acts well in some cases, but is very apt to cause so much nausea and vomiting as to compel its discontinuance.

Polotebnoff, believing the disease to be a neurosis, advocates the use of bromide of potassium and of ergot.

As most patients are worse in winter than they are in summer, when the skin is more moist from active perspiration, a residence in a mild climate might well be commended to a chronic psoriatic.

External treatment. Before making any application to the psoriatic skin the scales must be removed by bathing with soap and water, or by warm alkaline baths. Sometimes bathing followed by inunctions of the skin with simple oil, or vaseline, combined with attention to diet, will produce a cure. These measures should be tried first in all newly beginning cases. In some cases there will be well-marked eczematous conditions. Then we must use remedies applicable to that disease. Generally we must resort to more stimulating remedies. The most useful and most promptly curative external remedy is chrysarobin (chrysophanic acid). The objections to it are its tendency to produce an acute dermatitis and its permanent staining of everything with which it comes in contact. These unpleasant effects may be in part overcome by combining the drug with flexible collodion or traumaticin, but only in part. The dermatitis is always most marked upon those parts in which there is laxity of the skin, and if it is used on the face it is prone to produce great swelling about the eyes. Care must be taken not to get it in the eyes, as it causes violent conjunctivitis. These effects should make us very cautious about using it on the scalp, and prevent its use on the face.

The most active form in which to use the drug is in an ointment, as of lard, lanolin, or vaseline. Gelanthum, and plasment are excipients that have the merit of not being greasy, and of being readily and entirely removed

by means of water. Flexible collodion and traumaticin (liquor gutta-perchæ) are good excipients.

The strength of chrysarobin should not exceed one drachm to the ounce, as a rule; though in exceptional cases it may be used in greater strength. Its activity is increased by the addition of salicylic acid (three per cent.), and then it is best to use it in a lower percentage, even five per cent. being active enough. An alkaline bath before using the chrysarobin increases its potency. If we use an ointment, it should be thoroughly rubbed in once a day after the scales are removed. If the vehicle is gelanthum, plasment, collodion, or gutta-percha solution, the spots should be painted over as often as the film left by the application falls. The patient should always be warned against getting the drug in his eyes. A favorite formula of Dr. George H. Fox is the following:

℞	Chrysarobin.,	āā	2 parts.
	Ol. cadini,		
	Ac. carbolici,		1 part.
	Ac. oleic.,		50 parts.—M.

If the chrysarobin produces too great a reaction, it must be stopped, and the skin treated with vaseline and starch powder, or an alkaline wash. The action of the drug upon the skin is peculiar. It stains the skin about the patches a mahogany red, while the patches become smooth and white. It discolors the nails and the hair, but after a time the staining disappears. Not so the staining of the clothing, which is permanent. It is said that it can be somewhat lessened by soaking the clothes in plain water before using soap in washing.

Before chrysarobin was discovered much reliance was placed on the ointment of the ammoniate of mercury. It is still a reliable remedy, but it cannot be used over the whole body in a general psoriasis on account of the danger of absorption of the mercury. It is the pleasantest and promptest application to the scalp and face, and can be used there while chrysarobin is used on the rest of the body. An ointment of

[redacted]

[redacted]

[redacted]

as an ointment or lotion in the strength of fifteen grains to three drachms to the ounce. As it is colorless and of pleasant odor it is suitable for use on the face. The same authority advocates the use of turpentine locally. He uses the oleum pini sylvestris with sufficient oil of lavender or essence of lemon to mask its odor. If used undiluted, the skin must be smeared with vaseline to prevent its cracking. It is better to use it diluted with olive oil, ʒj of oil of turpentine to ʒvij of olive oil, the proportion of the oil of turpentine being increased as the skin becomes accustomed to it. The addition of oil of cade or oleum rusci to the mixture increases its efficacy.

Salicylic acid, five to twenty per cent. strength, will remove the scales, and in some cases will prove curative. The soap treatment, as described under chronic eczema, is of great value in some chronic circumscribed cases. Sulphur ointment, oleate of copper, "rufigallic" acid, ten per cent. in ointment, and resorcin, have all done well in some cases. Hydracetine, anthrarobin, and aristol are among the latest remedies, but have not proved themselves as active as some of the older ones.

Gallacetophenone in five to ten per cent. strength as an ointment or dissolved in collodion may be tried, but is not as good as chrysarobin.

Some patients have found benefit from the use of natural mineral waters at spas. It is possible that much of the benefit so obtained is from the prolonged and regulated bathing. Wearing rubber clothing next the skin, or with a fine piece of muslin between the rubber and the skin to avoid the production of eczema by the rubber, will soften and remove the scales, and hasten the disappearance of the patches.

PROGNOSIS. A cure of psoriasis may be promised with a fair degree of certainty as far as the removal of the eruption then out is concerned; but no promise can be made that the disease will not relapse. In this respect psoriasis resembles rheumatism and gout. While most relapses are readily removed in the course of a few weeks, in some cases one or more patches will be remarkably obstinate.

Psorospermosis Follicularis Cutis is the name given by French writers, notably by Darier,[1] to a disease of the skin, cases of which had previously been reported under the names of lichen spinulosum (Hutchinson), ichthyosis sebacea cornea (Wilson), acne sebacea cornea (Guibout), ichthyosis follicularis (Lesser), keratosis follicularis (Morrow and White), acné cornée (Leloir and Vidal), cacotrophia folliculorum (T. Fox), and sauroderma. The title psorospermosis was given by Darier in the erroneous belief that he had found certain parasites belonging to the order of protozoa, which have been named psorosperms, in causal connection with the disease. These have been demonstrated to be only changed epithelial cells. (For description of the disease see Keratosis follicularis.)

Pterygium is simply an overgrowth of the normal nail-fold at the proximal end of the nail, so that it covers to a greater or less extent the lunula. It may be cut off.

Purpura. Synonyms: Hæmorrhœa petechialis; (Ger.) Blutfleckenkrankheit.

Symptoms. By this term is meant a hemorrhage into the skin which is not caused by direct traumatism. It is always readily recognized by the red, purple, or blue-black color that it causes, which cannot be made to disappear by pressure. The hemorrhage may take place into any part of the skin; into the subcutaneous tissues; or into any of the glandular apparatus of the skin. It occurs with suddenness, and produces variously sized lesions to which certain names have been applied. When they are small, from pin-point size to perhaps an inch in diameter, they are called *petechiæ*. When occurring in the form of more or less long streaks they are called *vibices*. Large bruise-like lesions with more or less swelling are *ecchymoses*. Blood tumors of all sizes are *ecchymomata* or *hæmatomata*. The color of all purpuric lesions depends upon their age. When first formed they are bright red, claret, or purple. Before disappearing they pass through various shades of color such as are seen after an ordinary bruise, becoming blue black, greenish black,

[1] Ann. de derm. et de syph., 1889, x., 597.

or brownish. These changes are due to the gradual absorption of the effused blood and the hæmatin deposited from the blood globules. There is no definite time for complete absorption to take place, but eventually no trace is left of the previous hemorrhage.

If the extravasation of blood takes place into the hair follicles, we will have papules formed. If between the layers of the epidermis, hemorrhagic bullæ may result. Hemorrhage into sweat glands will give rise to hæmatidrosis. As complications of other dermatoses hemorrhage may occur, as in urticaria, pemphigus, and eruptive fevers, but these should not be elevated into special varieties of purpura.

There are three varieties of purpura, namely, purpura simplex, purpura hæmorrhagica, and purpura rheumatica. It is convenient for us to preserve these varieties for a time, though the results of the latest studies seem to indicate that the second variety is but a more developed form of the first, cases of simple purpura having been seen to run into the hemorrhagic form. By Crocker and others the third variety is regarded as a form of erythema exudativum. It, too, has been seen to run into the hemorrhagic form.

Purpura Simplex is the most common variety, and usually takes the form of petechiæ, the lesions being round or oval, or irregular in shape, or even circinate. Duhring describes a case of the circinate form, as does Stelwagon.[1] The lesions appear suddenly, generally without antecedent symptoms, and often at night. Like other varieties of purpura, the lower extremities are the most common seat of the eruption, especially their flexor aspects, but any part of the skin may be attacked, as also the mucous membranes. Crocker affirms that in children the lesions appear first upon the neck and upper part of the back. The lesions appear in crops, and most often are symmetrical. There may be but a single outbreak, and the whole disease may be at an end in a week or two. But it may be prolonged for many weeks by a succession of outbreaks. There is usually no constitutional disturb-

[1] Journ. Cutan. and Gen.-Urin. Dis., 1887, v., 369.

ance, or a slight rise of temperature and malaise, and the only things the patient complains of are the spots, and perhaps some itching. There may be lassitude, malaise, and slight elevation of temperature. Recovery is the rule. Exceptionally purpura simplex passes over into

Purpura Hemorrhagica. This form is also called *morbus maculosus Werlhofii* and *land scurvy.* It usually begins as such, and is heralded by pronounced malaise, rise of temperature, headache, and perhaps convulsions. It begins without prodromata. It differs from the previous variety in the more extensive hemorrhages that take place, ecchymoses forming rather than petechiæ, and in free bleeding from all the mucous membranes—nose, mouth, stomach, urethra, rectum, vagina. These are so copious and uncontrollable at times that the patient will literally bleed to death in a few hours. Sudden death may also be caused by hemorrhage into the meninges and brain. An excellent study of this fulminating form of purpura has been made by Lockwood.[1] In his case there was a rise of temperature to 106.2° F. just before death, and the patient died in about sixty hours from the onset of the disease. He collected thirty cases, in thirteen of which the patients died from acute anæmia, internal hemorrhages, or septic infection, the shortest duration of any one case being seven hours; in eight cases death was due to cerebral hemorrhage; and in four cases the patients were pregnant. Happily all cases of hemorrhagic purpura are not fatal. In them the bleeding is moderate in amount, and the patient is gradually restored to health. Relapses may occur.

Purpura Fulminans is the name applied to those very grave cases of purpura in which the patient dies in a short time. It is a form of purpura hæmorrhagica. It may affect several members of the same family, which suggests its infectious nature. It has followed scarlatina.

Purpura Rheumatica. This is also called *peliosis rheumatica.* It resembles purpura simplex in every way, excepting that the outbreak of the eruption is preceded or followed by pain in the joints accompanied by swelling,

[1] Med. Rec., 1891, xxxix., 155.

the malaise is more marked, and there is often rise of temperature. The eruption is often most abundant about the joints. The acute symptoms subside in two or three days, but relapses are frequent. True rheumatism may be present at the same time. Valvular heart lesions have been reported to occur after this variety of purpura, even without true rheumatism. Rarely this variety may pass over into the hemorrhagic form.

ETIOLOGY. Many causes have been assigned to account for the occurrence of purpura. We know that it may occur at any period of life, in both sexes, and in the most varying conditions of health. We meet with cases in the spring and autumn, in weather that is damp and cold. There is no doubt that purpura occurs as a symptom in different diseases and cachexiæ; after the ingestion of certain drugs, and under other circumstances too numerous to catalogue here. Here we can readily surmise that one or both of two things have occurred, namely, a change of the blood itself that allows of its passing through the walls of the vessels or a change in the vessel walls themselves that permits the blood to pass through them. Purpura has been noted after the loosening of some artificial support to a part of the body, such as a tight bandage worn for a long time. It occurs not infrequently in old age. In both these conditions it is due to a weakening of the tone of the vessel. In the former case matters right themselves in a few days—a happy conclusion that cannot be anticipated in the latter case. Weakness of vascular walls may also be the cause of those somewhat rare cases of purpura without cachexia seen in infants. Other cases of purpura are due to small thrombi lodging in the smaller vessels. Some cases seem to be due to vasomotor or trophic nerve action causing either sudden alterations in the caliber of the vessels or degenerations in their walls. Recurring purpura has been noted about the point of greatest pain in neuralgia.

The microbian and infectious origin of purpura has its advocates. Some authorities believe that purpura occurring in an infectious disease is due to micro-organisms.

Letzerich[1] published a brochure on this subject in 1 in which he described the "bacillus purpuræ hæ rhagicæ Letzerich" as the cause of the disease. This sharp angles and edges, is readily cultivable, and cultures injected into rabbits give rise to hemorrh either spontaneously or on slight trauma.

PATHOLOGY. It is in the corium that the hemorrh chiefly occur, but the subcutaneous tissues are someti implicated. Examination of the blood shows irreg changes in the number of blood cells and in their form well as in the quantity of fibrin.

DIAGNOSIS. The diagnosis of purpura is easily m No other disease produces bright-red, slightly elev lesions, the color of which cannot be made to disap under pressure. From *flea-bites* they are distinguish by the absence of a central punctum. Purpura hæm rhagica bears a close resemblance to *scurvy*, but in latter a dietary deficient in vegetables is a marked e logical factor; there are also greater prostration, swelli of the gums, loosening of teeth, and brawny swelli of the limbs. It is possible that further investigations scurvy may show that it is but a form of purpura hæm rhagica that has been modified by diet.

TREATMENT. In simple purpura there is not much be done except to put the patient in as good a hygie condition as possible and relieve symptoms. In pelio rheumatica and purpura hæmorrhagica the patient shou be kept absolutely quiet in bed, his diet should be of t most nutritious and easily assimilable kind, and ergot a iron administered. Of course, if there is hemorrha from the nose, vagina, or other mucous cavity, an eff must be made to stop the flow by means of a tampon, i hot water, or any method that experience has proved us ful. Ergotine may be employed hypodermically; a turpentine; dilute sulphuric acid; nitrate of silver in pi form, one-eighth to one-sixth of a grain three times a da and other astringents have been found useful. Letzeri recommends for the local treatment of bleeding from t gums—

[1] Monatshefte f. prakt. Dermat., 1888, ix., 312.

℞ Tinct. ratanhiæ, 10 parts
Tinct. iodini, 5 " M.

of which ten drops are to be taken in a wineglassful of water. For this purpose other astringents, as tannin, alum, and the like, may be used.

PROGNOSIS. From the beginning of a case it is not possible to say how it will turn out. We should therefore be very guarded in our prognosis. Most cases met with terminate favorably. Some apparently desperate cases recover.

Pustula Maligna. Synonyms: Anthrax; Malignant pustule; (Fr.) Charbon.

This is a disease of cattle, sheep, and horses, in which it is called splenic fever, and is due to local inoculation with the bacillus anthrax, often through the agency of flies. If the bacillus gains access to the internal organism, it produces a rapidly fatal general disease with no skin lesion. In the human the exposed parts—face, hands, and neck—are the most frequent sites of the disease. In a day or two after inoculation the patient notices a burning or itching of the affected part and the formation of a livid-red papule upon which a bulla or pustule soon forms. This ruptures, the red spot changes into a black gangrenous eschar, the parts around it become indurated, œdematous, of dusky-red hue, and studded with small vesicles or pustules. There are marked involvement of the lymphatics and enlargement of the neighboring glands, that may suppurate. In favorable cases the slough separates and healing by granulation takes place. In fatal cases the gangrenous process extends rapidly, symptoms of septic infection declare themselves, and the patient succumbs to the disease in from two to eight days. In all cases there is more or less constitutional disturbance.

DIAGNOSIS. The diagnosis of malignant pustule is made mainly by the rapidity with which the disease develops; the presence of the gangrenous patch with the hard indurated tissues about it; and the severity of the constitutional symptoms. The finding of the bacillus will verify the diagnosis.

TREATMENT. The total excision of the diseased patch by means of a free incision is the most radical and effectual treatment for the disease. The injection of iodine or of a five per cent. solution of carbolic acid under the eschar is a good method of treatment. The hyposulphite or sulphite of soda, and large doses of quinine, are worthy of trial.

Quinquaud's Disease. See Folliculitis decalvans.

Radesyge. See Lepra.

Raynaud's Disease. See Dermatitis gangrænosa.

Red Gum. "An obsolete term for various transitory eruptions in teething children." (Foster.) Commonly this is miliaria rubra.

Rhinophyma is the term used to designate that form of hypertrophic rosacea in which pendulous tumors develop on the nose. These may attain so great a size that they hang down over the mouth. See under Rosacea.

Rhinoscleroma. Synonyms: (Fr.) Rhinosclérome; (Ital.) Rinoscleroma; Perisarcoma.

SYMPTOMS. This is an exceedingly rare form of disease that was first described by Hebra and Kaposi. It affects almost exclusively the nose and its mucous membrane, and assumes the form of flat or slightly raised, sharply defined, isolated or confluent, very hard, lobulated, elastic plates, tumors, or nodes which are painful on pressure. These lesions are located in the skin or mucous membrane of the septum of the nose, or in the alæ and the neighboring parts of the upper lip. They can be raised from the underlying parts, but the skin is so infiltrated that it can move only with the growths. The color of the skin may be normal, or bright or dark brownish red. They may look like keloids or hypertrophied scars. The contiguous skin shows no abnormalities whatsoever. The epidermis over the growths often shows rhagades, from which exudes a viscid secretion which dries into yellowish adherent scabs.

The disease begins as a thickening and hardening of the

septum of one or both alæ without inflammatory reaction or pain. Slowly the nose becomes deformed, broad, and flat, and at last by progressive thickening of both septum and alæ the nostrils become occluded. The process may involve the lips so that the opening of the mouth becomes greatly lessened, and may affect the gums. More frequently it proceeds backward along the nostrils on to the velum palati. The growth shows little tendency to ulceration or retrograde metamorphosis. At the most superficial parts excoriations occur. Late in the disease the teeth

FIG. 61.

Rhinoscleroma.

may loosen and fall out, and the gums may atrophy. The disease begins in some cases in the pharyngeal vault. The epiglottis and larynx may be involved in the process, and aphonia, suffocative or epileptic-like attacks may occur. There is no constitutional disturbance, and the only subjective symptoms are those of discomfort on account of the interference with respiration. The disease is steadily progressive, shows no tendency to recovery, and recurs rapidly when the diseased parts are cut away.

ETIOLOGY. All conditions of men are affected, and both sexes with about equal frequency. It usually begins between the fifteenth and fortieth years. It is most frequent in warm climates, and is specially prevalent in Austria and Russia. A bacillus has been found in the tissues by Frisch that is regarded as the cause of the disease. It is described as short, thick, ovoid, capsulated, in free groups and in cells.

DIAGNOSIS. The location upon the nose and upper lip alone, the ivory hardness of the growths, and their progressive course without tendency to ulceration or softening, will establish the diagnosis as against syphilis, epithelioma, and sarcoma. Keloid rarely occurs upon the nose, and never runs the characteristic course of rhinoscleroma.

TREATMENT. Treatment is very unsatisfactory. The growths may be excised or curetted away, but neither process will assure against a relapse. The nostrils may be kept open by means of sponge-tents, and the like. Besnier[1] recommends boring into the tissues with points of chloride of zinc for the purpose of giving passage to air. Pyrogallic acid, ten per cent. in vaseline, has been recommended as of value.

PROGNOSIS. The prognosis is bad. The disease is progressive, and threatens life by suffocation on account of involving the larynx.

Rhus-poisoning. See Dermatitis venenata.

Ringed Hair. See Canities.

Ringskurv. See Trichophytosis.

Ringworm. See Trichophytosis.

Rissopola Lombarda. See Pellagra.

Ritter's Disease. See Dermatitis exfoliativa neonatorum.

Rodent Ulcer. See Epithelioma.

Rosacea. Synonyms: Acne rosacea; Gutta rosacea seu

[1] Ann. de derm. et de syph., 1891, ii., 603.

rosea; Acne erythematosa; (Fr.) Acné rosée, Couperose, Rosacée; Rosée; (Ger.) Kupferrose, Kupferfinne, Kupfrigegesicht.

A chronic disease of the skin, limited in most cases to the middle third of the face from above downward, and characterized by a diffused or patchy redness made up of dilated capillaries.

This disease is very commonly called acne rosacea, but inasmuch as the papules that often occur with the disease are not true acne pustules it is best to drop the "acne" from its title.

Symptoms. Rosacea is one of the more common skin diseases, and is peculiar in affecting, with few exceptions, only the middle third of the long diameter of the face—the forehead, nose, and adjacent portions of the cheeks, and the chin. The nose may be affected alone, and in many cases the forehead escapes entirely. The disease has three forms or stages. The first consists in a simple redness of the affected skin with more or less well-marked dilatation of the capillaries. In the second stage there is an added element of superficial papules and pustules, and perhaps nodules. In the third stage there is marked hypertrophy of the skin. The process may stop at any stage. An oily seborrhœa may complicate the disease, Unna even claiming that his seborrhœal eczema is the first stage of all cases of rosacea.

The first stage varies in degree. At first there may be faint flushing of the skin, as after the ingestion of hot fluids, exposure to cold, and the like. This being repeated, permanent dilatation of the capillaries takes place. The dilated capillaries are not evident all over the patch. The greater part of the patch may present an even redness. The border of the patch is ill defined, and no matter how fiery red the color may be the skin feels cool to the touch. This is because the congestion is passive on account of a sluggish circulation. In some cases, however, there may be but little general redness, only a number of dilated capillaries. These telangiectases are best seen on the nose. In some cases there may develop a congestive seborrhœa or even an erythematous eczema, which, yield-

ing to appropriate remedies, leaves behind an undoubted rosacea.

The second stage may develop from the first after the latter has lasted a considerable length of time, or be almost coincident with it. The number of papules and pustules may be considerable, and the tubercles large. If so, the amount of redness will be great. The peculiar feature of the pustules is their superficiality. They are usually quite small, say of pinhead size, and when pricked give exit to but a small drop of thin pus. The tubercles are enlarged

FIG. 62.

Rhinophyma. (LASSAR.)

or clogged sebaceous glands, but all these lesions are but secondary to the chronic hyperæmia, and not primary, as in acne. There may also be comedones and true acne scattered over the face.

While the majority of cases never go beyond the second stage, in some cases the continued and excessive hyperæmia leads to an increase of connective tissue, and the nose, tip and sides, becomes converted into a lobulated mass of tissue, sometimes so great as to form pendulous tumors hanging down over the mouth. This last condition is

known as *rhinophyma*. The whole nose is of deep-red or purple color, and studded over with crater-like openings, leading down into the thickened mass. At times ulceration occurs in these crypts and causes additional annoyance and deformity from destruction of tissue.

While in the vast majority of cases the middle third of the face alone is affected, in some cases the whole face becomes red, and the redness may extend down upon the neck. Rosacea is seen at times on the scalp of bald-headed persons just above the forehead.

Etiology. The cause of the disease is probably a vasomotor reflex neurosis. Schwimmer regards it as a tropho-neurosis; Unna, as a seborrhœal eczema. It occurs in adult life, most frequently after the twenty-fifth or thirtieth year, though it may occur even at puberty. There is no connection between it and acne. While many patients will tell you that they had "pimples" when young, as many will inform you that they have always had a good complexion until the rosacea began. Women are more frequently affected than men. Digestive disturbances are a very common cause of the disease, and the trouble may be located either in the stomach, intestines, or accessory digestive organs. Drinking of alcoholics will undoubtedly cause it, on account of producing both gastric catarrh and reflex dilatation of the facial vessels. The inordinate use of strong tea acts in the same way, and probably gives rise to as many cases as does alcohol. Exposure to the weather or to extremes of temperature will cause rosacea without digestive disturbances, but when combined with the latter leads on to the most brilliant examples of it. Constipation, menstrual derangements, anæmia, chlorosis, gout, lithæmia, the menopause, each one has been noted in connection with rosacea. The use of cosmetics has been followed by it. Various morbid conditions of the mucous membrane of the nose have been found in connection with it. Tight lacing is frequently followed by rosacea.

Pathology. In the first stage there is dilatation of the blood vessels in the cutis. In the second stage this is more pronounced, and the corium is slightly thickened

and œdematous in places. In the third stage there is in addition enormous hyperplasia of the connective-tissue elements of the cutis, and the sebaceous glands are enlarged. (Elliot.)

DIAGNOSIS. When we meet with a case of redness of the skin, with or without papules, pustules, or tubercles, that is limited to the middle third of the vertical diameter of the face, it is probably one of rosacea. It differs from *acne* in its limited area, the superficial character of the pustules, the absence of comedones, and the capillary dilatation. *Lupus erythematosus* may occur in the same location, but in it we do not find the dilated capillaries; but we do find thickening of the skin, adherent scales with prolongations from their under side, a sharply defined, slightly raised border to the patches, and, if the disease has lasted any time, more or less delicate cicatricial tissue. In its early stage the diagnosis is not always easy. *Lupus vulgaris* should not confuse us, as in rosacea there is an entire absence of the characteristic apple-jelly-like tubercles of lupus. The *tubercular syphilide* may resemble rosacea in its second or third stage, but soon it undergoes softening and ulceration—processes that do not occur in rosacea. Moreover, it is not symmetrical, but occurs in the form of groups of tubercles, presents no telangiectases, and evidences of other syphilides are usually to be found. *Erythematous eczema* burns and itches, the skin is somewhat swollen and scaly, and feels harsh and leathery. Sometimes an eczematous condition complicates a rosacea, and the latter declares itself only when the former is cured.

TREATMENT. In order to treat rosacea successfully we must first endeavor to remove the cause. We must inquire as to the condition of the digestive apparatus, the manner in which menstruation is performed, exposure to heat and cold, and, in fact, ascertain the patient's general condition. Then we must address ourselves to the regulation of any deranged function. We must stop the use of alcoholics in any form, and the ingestion of all hot fluids, such as tea, coffee, and soup. All these tend to produce dilatation of the blood vessels of the face and to keep up those conditions we wish to remove. The patient's

diet should be carefully regulated, and such things as pastry and sweets cut off, so as to make digestion as easy as possible. Medicinally, tincture of nux vomica, the mineral acids, or alkalies are to be administered q. r. n. Nux vomica has often seemed to render good service, even without there being marked digestive disturbance. Salol is a good remedy in many cases of intestinal fermentation. Ergot or ergotine proves useful in some cases, either with or without uterine disturbances. Ichthyol is commended by Unna. The ammonia-sulphate is the preparation he advises, and it is best given in capsules to cover the taste. The dose is three drops two or three times a day. In a rather extensive trial of this by me in some sixty cases in which it was used alone, with no external application, the result was unsatisfactory, only one or two cases being benefited. Ichthalbin has been substituted for ichthyol, and some good results from its use have been reported.

The local treatment is important in hastening a cure, but is not of itself curative in well-marked cases of reflex rosacea. The patient must be instructed to protect the skin from the action of wind and weather, by either applying some ointment, such as cold cream, or a lotion, such as the calamine lotion, or a powder, such as cornstarch, before venturing out of doors. The face should be bathed with hot water every night before going to bed, the water being as hot as the skin can stand without burning, and it should be sopped on for about ten minutes, fresh supplies of hot water being added from time to time so as to maintain a uniform temperature. This is beneficial because the primary dilatation of the vessels caused by it is followed by contraction. After the bathing the following lotion should be applied:

℞ Zinc. sulphat., } āā ʒj; āā 3
Potass. sulphuret., }
Aquæ rosæ, ad ℥iv., ad 100 M.

It is, perhaps, as good as any application we can make. Van Harlingen gives another good one as follows:

℞ [illegible] ℥ss 12
[illegible] ℥ss 1
[illegible] ℥ss 2
[illegible] ad ℥iij 100 M.

[illegible] or the white [illegible] may be used, or simply powdered [illegible] Vleminckx's solution may be [illegible]:

℞ [illegible] ℥ss 15
[illegible] ℥j 30
[illegible] ℥ss 30 M.

[illegible] until the mixture [illegible] then filter. This is to be [illegible] at first, and used at night only, [illegible] in the morning. The dilution is to be [illegible].

Any of these remedies may produce a dermatitis, [illegible] desired. For this [illegible] to twenty per cent. in [illegible] as the skin begins to peel, when the [illegible] with cold cream until the irritation [illegible]. Then the remedy is to be used again. Hillier[1] recommends washing the face in the morning with hot water, followed by a solution of oxide of zinc, three or four grains to the ounce, sopped on for half an hour. Before going to bed the following is to be applied to the face:

℞ Alcohol. camphorat., ℥ii–iiiss; ℥ss ad 15
Sulphur. sublimat., ℥j; 30
Aquæ destillat., ad ℥viij; ad 250 M.

After six days this is to be discontinued for a couple of days, and then begun again.

Ichthyol, in five to fifty per cent. strength in aqueous solution, has been highly extolled by Unna and others, as well for external as for internal use.

G. W. Wende[2] reports a cure by using galvanism,

[1] Progrès méd., 1880, viii., 182.
[2] Buffalo Med. Journ., 1898–9, xxxviii., 254.

placing the anode over the abdomen and the cathode on the face.

If the case is highly inflammatory when first seen, our first attempts should be in the direction of reducing the inflammation by means of soothing ointments. After a few days we can begin the treatment of the rosacea.

Surgical procedures are necessary to hasten the removal of pustules, and to destroy dilated vessels and hypertrophic tissue. Pustules are quickest removed by the curette, as in acne. Dilated vessels are best destroyed by electrolysis with the electric needle attached to the negative pole, introducing it perpendicularly into the vessel at one or more points of its course, or longitudinally in its course, and letting it remain for a few seconds until the vessel appears as a white line. The method of using electrolysis is more fully described under hypertrichosis. It is often necessary to repeat the operation several times before the vessel is destroyed. The thermo-cautery may also be used in the same way. Multiple scarification is most useful in reducing red patches. It may be done by means of a scalpel, making parallel lines near together and through the skin, and then a second series over these; or a multiple scarifying-knife, as sold in the shops, may be used for the purpose. H. Fournier[1] advises the use of a flat needle rounded at its end and bevelled on its under side. The vessels are to be cut obliquely to their long axis, while the skin is put on the stretch. After scarifying, bleeding should be encouraged for a few moments by the application of hot water. Then the surface should be swabbed over with a solution of carbolic acid, two drachms to the ounce of glycerin and water. This will check the bleeding and constringe the vessels. No after-treatment is needed, as a rule. If reaction tends to go too far, a soothing ointment may be applied. The operation should be repeated once every week or two. Multiple punctures may be made by the acne lancet, the subsequent treatment being the same as after multiple scarifications. It is astonishing to see how rapidly the redness will be reduced in many cases, and this without deformity

[1] Journ. mal. cutan., etc., 1895, vii., 257.

being caused. Multiple scarifications may be employed for the reduction of tuberculated masses—rhinophyma—but a plastic operation is the most satisfactory method of treatment.

PROGNOSIS. In cases of rosacea arising from exposure to weather in drivers and sailors, and in those following similar pursuits, we cannot expect to effect a cure, as the patients cannot do the one thing necessary—give up their occupations. In most all other cases we can promise great amelioration of the annoying redness, and in many we can effect a cure; but we had best not attempt to treat a patient who will not follow our directions as to diet and hygiene.

Rose. See Erysipelas.

Rosée. See Rosacea.

Rose Rash. See Erythema.

Roseola. See Erythema roseola.

Roseola Pityriaca. See Pityriasis rosea.

Roseola Syphilitica. See Macular syphilide.

Roseole Squameuse. See Pityriasis rosea.

Rötheln, *Rubeola*, or German measles, is a mild contagious disease that resembles measles, but differs from it in the mildness of all its symptoms, in the lighter color and smaller size of its lesions and in the absence of the crescentic arrangement of them. Its period of incubation is two to three weeks. Like measles, it may be mistaken for either an erythema or an erythematous syphilide, and its diagnosis is along the same lines as is that of measles, which see. It is not so blotchy as measles, and the catarrhal symptoms are absent or but slight. Swelling of the glands of the neck is a symptom that may or may not be present, but when present is characteristic. Febrile movement is slight. The lesions may take the form of small papules, and assume rather a brownish than a red color. The eruption is often itchy, and the lesions may occur on the mucous membranes. It differs from scarlatina in the

mildness of all its symptoms, and in the absence of the diffuse scarlet eruption of the latter disease.

Rothlauf. See Erysipelas.

Rötz. See Equinia.

Rupia. See Syphilis.

Rupia Escharotica. See Dermatitis gangrænosa infantum.

St. Anthony's Fire. See Erysipelas.

Salt-rheum. See Eczema.

Salzfluss. See Eczema.

Sarcocele of the Egyptians. See Elephantiasis.

Sarcoma. We are here interested in sarcoma of the skin alone. Sarcomas may be primary in the skin, but most often they are secondary. They form variously sized tumors, but tend to run a malignant course, multiplying more or less rapidly, breaking down, affecting internal organs by metastasis, and killing the patient in a few months or years. There are three types of sarcoma, namely, the round-cell sarcoma, the small-cell sarcoma, and the melano- or pigment sarcoma. Very commonly sarcomata are of mixed type; or sarcomata may be divided into two varieties—the pigmented and the non-pigmented.

According to Brocq,[1] who, following Perrin, has made an exhaustive study of the disease, *primary melanotic sarcoma* originates frequently from an irritated nævus or other pigmented lesion, but may occur independently. At first it is always single and small. It tends to enlarge and attain the size of a nut. In shape it is oval or spherical. It is nearly always sessile. Its color is dark blue or black. It is very hard to the touch. It may remain stationary for a long time, but in course of time new tumors will appear, either about the original one or at distant points by means of the lymphatics. Some of the original tumors will disappear, while new ones appear; some will break down and form irregular ulcers whose floors are black and uneven, and secrete a thick, melanotic

[1] Thèse de Paris, 1885.

liquid, or a little pus, or almost solid black matter. A large lobulated mass may be formed by the coalescence of a number of smaller lesions. The viscera become involved, and death soon occurs.

A rare form of melanotic sarcoma is described by Hutchinson as *melanotic whitlow*, which at first is a chronic onychitis, the border of which looks like a lunar-caustic stain. It very gradually develops into a fungating tumor, slightly pigmented. The nail is shed, and generalization occurs (Crocker).

Non-pigmented primary sarcoma may be generalized or localized. The generalized form begins usually upon the extremities, and causes upon the hands and feet a peculiar hard œdema, accompanied by tension of the skin, and perhaps itching or pricking. It may begin as brownish-red, livid, purple, or blue patches, upon which pinhead-sized nodules appear, which gradually enlarge. In some cases little, infiltrated, isolated, blue or reddish-brown nodes will form. Sometimes the first appearance will be a diffused cyanotic patch, which later will become a hossy elevated patch. When the disease is fully developed the hands and feet are thick, deformed, infiltrated, as firm as cartilage, brown or blue with a red tint. The skin is glossy, scaly, uneven. The nodes may be raised, pedunculated, or ulcerated. Similar lesions are found upon the rest of the body, though rarely on the trunk. They may remain stationary, disappear, fall off, multiply, ulcerate, or, finally, involve the mucous membranes, and cause death.

The localized form develops ordinarily from an irritated nævus, and is most often encountered on the extremities. It forms a hard, wrinkled tumor, which may ulcerate. Its color is usually that of the normal skin, though it may be red. It may grow to be the size of an orange or take on a mushroom-like form. It may not generalize for a long time, or it may do so spontaneously or after an attempt at removal.

Sarcomas are very vascular, and are subject to profuse hemorrhage when injured or when they ulcerate.

Under the name of *idiopathic multiple pigmented sarcoma*

a disease was first described by Kaposi. It occurs in adults, and begins as an œdema of the hands, feet, and face with more or less pruritus. Later dark-blue or purplish spots appear deep in the skin, which after a time form raised nodules, which may be sessile or pedunculated, but are always dark blue or purple. The extremities or face become elephantiasic in appearance, and covered with scales and more or less rugous. The tumors may remain for a long time or disappear, or, rarely, ulcerate. The color of the tumors is due to vascular development. The disease is chronic in its course, and may last for fifteen or twenty years without affecting the patient's health. The disease may extend up the limbs to the trunk. Recovery may take place.

ETIOLOGY. We know very little in regard to the etiology of sarcoma. It occurs at all ages, some of the most malignant cases being seen in childhood. Brocq says that the localized non-pigmented sarcoma is most frequent in women, and that the generalized form is most frequent in robust men of forty to sixty years. Piffard gives the ages at which they are most prone to occur as before the fifteenth and after the forty-fifth year.

DIAGNOSIS. The diagnosis of sarcoma is generally easy, but at times it is difficult. The pigmented forms are usually readily recognizable by their color. The non-pigmented single sarcoma may be distinguished from *epithelioma* by its feel, which, though firm, lacks the hardness that is characteristic of cancer. *Fibromata* are not so firm as are sarcomata, are more commonly pedunculated, and show no tendency to degenerative changes. *Mycosis fungoïdes* has a primary eczematous stage; its tumors are of a brighter red, and they come and go, and undergo various changes much more rapidly than do sarcomata.

TREATMENT. Excision of a single non-pigmented sarcoma is often curative. In multiple sarcomata, and in the melanotic variety, operative interference is usually not only not curative, but has often seemed to hasten generalization. Köbner and others have used hypodermic injections of arsenic with brilliant results in some cases.

[redacted]

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[redacted] and a
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[redacted] the patient.
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[redacted] the secondary
[redacted] and eczematous

[redacted] is that his skin
[redacted] sooner or later,
accordance with the peculiarities of his skin, he produces pin-head sized excoriations. Later, the irritation continuing, eczematous patches result. When he presents himself to
[redacted]rian, the latter will find on examination excoria-
[redacted] to scratching, and he will notice that the lesions
[redacted] principally between the fingers, on the anterior
[redacted] the wrists and somewhat on the forearms, about

the axillæ, upon the breasts about the nipples in women, upon the male genital organs, about the umbilicus and lower part of the abdomen, and often upon the buttocks of both sexes, and, in children especially, upon the anterior surface of the ankles and between the toes. In adults, these latter situations are not so frequently affected. Closer examination may be rewarded by the discovery of the pathognomonic sign of scabies, namely, the *cuniculus*, or burrow, which is usually found most readily on the inner border of the hand, on the inside of the fingers, and on the penis. It forms a delicate, slightly raised, whitish or gravish, wavy, often bowed line, from one-eighth to one-half an inch in length, and having a white speck at one end which marks the place where the itch-mite is. These are not always to be found; indeed, in most cases they are difficult to find, because they are broken up either by the occupation of the individual, by the use of soap and water, or by scratching. In people with delicate skin the burrowing of the itch-mite will set up an inflammatory process, and papules, vesicles, and pustules will form, quite independently of the scratching.

While the regions mentioned are the ones always affected in well-marked cases, variations in the extent of the disease are observable. In some cases the hands are free, and but few lesions are present anywhere. Here, if it is a male, the crucial test will be the examination of the privates, where a scratch-mark or a burrow will be found almost without fail. In other cases hardly any part of the body will be free from excoriations, pustules, or eczematous patches, excepting the face, which is affected only exceptionally, and then nearly always in children. In these bad cases furuncles and large ecthymatous pustules join themselves to the already multiform eruption of scabies. Urticaria is also present in some cases, its wheals being interspersed among the other lesions. Should some intercurrent fever arise, the symptoms of scabies will subside, to reappear when the fever is past. The so-called Norwegian Itch is only a very much aggravated form of the disease, on account of the want of personal cleanliness of the people. The face in this form may be affected, the

nails split and shed, and the palms and soles covered with thick crusts.

ETIOLOGY. Scabies is due to the irritation set up by the acarus scabiei and by the scratching employed to relieve the same. The vesicles, papules, or pustules about the burrows are due directly to the acarus; it may be on account of some irritating substance secreted by it. The

FIG. 63.

Acarus scabiei. Back.

disease is contagious, but requires prolonged contact, as by holding the hand or sleeping with an infected person. It is very rare for it to be communicated to a physician in examining a patient.

According to Greenough,[1] it is most prevalent between the ages of five and thirty, and comparatively rare after the fiftieth year. This, he thinks, is due to the fact that

[1] Boston Med. and Surg. Journ., Sept. 23, 1886.

in advanced life the epidermis becomes harder and dryer, and forms a less suitable habitat for the acarus. A few years ago the disease was not common in this country, but now it is an every-day occurrence to meet with new cases in our dispensaries, and not an infrequent one to meet with it in private practice.

PATHOLOGY. The *acarus scabiei* is very small, being barely visible to the naked eye, the female being but one-

FIG. 64.

Acarus scabiei. Under surface.

sixtieth to one-eightieth of an inch long, and the male still smaller. Its width is about two-thirds of its length. It has eight legs—four on each side of its head, to which suckers are attached, and four posteriorly, to all of which, in the female, bristles are attached; while in the male the inner ones are wanting in bristles, but provided with suckers for attaching himself to the female in copulation. On the back are a number of short bristles. A glance at

the accompanying plates will describe the animal better than words.

The impregnated female acarus having landed on the skin, soon stirs about, and having found a suitable place, it rests on its hind feet, takes an oblique position, pierces the

FIG. 65.

Burrow of scabies with acarus. (After KAPOSI.)

skin, and bores a hole, into which it forces itself. It lodges in the deeper layers of the epidermis, above, and sometimes in the mucous layer. It bores a burrow equidistant between the surface of the epidermis and the level of the

papillæ of the corium. Being prevented by the bristles on her back from moving backward, she moves forward, and lays her eggs. Her duration of life is from six weeks to two months, and during this time she lays some fifty eggs. These hatch out, reach the surface of the skin, meet the male, become impregnated, bore in their turn into the skin, and so keep up the process. As the thinnest parts of the skin are most easily punctured, it is just in these parts that we find the lesions most commonly. The scratching often extends far beyond the sites of the burrows. Fournier found that an acarus died in seven days when immersed in cold water, in ten days when in warm water, and in two to four days in a solution of green soap. He denies the commonly accepted view that the acarus is a night-prowler, though he allows that it is most active at night.

DIAGNOSIS. The presence of pustules and scratch-marks between the fingers, on the anterior face of the wrists, about the umbilicus, on the breasts in women or the genitals in men, is enough to make the diagnosis of scabies. If a cuniculus can be found, it will be corroborative evidence. *Eczema* is more patchy and is not so markedly limited to the characteristic locations of scabies. *Pediculosis vestimentorum* presents long, parallel scratch-marks instead of the small excoriations of scabies, and their characteristic locations are over the shoulders, about the girdle, and along the outside of the arms and the inside of the thighs where the seams of the clothing come. The itching of scabies is worst at night, while that of pediculosis is most marked in the daytime. *Urticaria* is a general disease characterized by wheals, and shows no tendency to localize itself in certain regions. Should urticaria complicate scabies, the wheals will be disseminated while the lesions of scabies will be most marked in their characteristic locations.

TREATMENT. If the disease is recognized, there is no difficulty in curing it, though there are various methods employed. Perhaps the oldest and one of the most reliable, though not the most rapid "cure," is to have the patient take a warm bath with soap and water, scrubbing

himself thoroughly so as to remove as much of the old epidermis as possible. Then he should dry the skin with vigorous friction, and rub into every diseased spot ordinary sulphur ointment. When this is done he should smear the rest of the skin with the ointment, put on the same clothes, and go about his business. The rubbings with the ointment are to be repeated morning and night for three days, the patient wearing the same underclothing by day, and bed- and night-clothing by night. At the end of three days another bath is to be taken, the clothing changed, and the patient should then present himself for examination. If fresh lesions are found, a second course should be taken, which most always will be sufficient. An artificial eczema is apt to be set up by the sulphur, and as eczema itself itches we must not take the continuance of pruritus beyond the second course as evidence of the scabies not being cured. It is better to stop the sulphur for a few days, and put the patient upon a mild, protective dressing to his skin, such as vaseline and cornstarch. If the itching grows worse instead of better, a third course of rubbing must be gone through with. Instead of plain sulphur ointment we can add balsam of Peru, about half a drachm to the ounce, or use the modified Wilkinson's ointment, as follows:

℞	Sulph. sublimat., Ol. cadini,	āā ℥iv;	āā	16
	Creta præparat.,	℥iiss;		10
	Sapo viridis, Adipis,	āā ℥j; p. æ.	ad	100

M.

S. Sherwell,[1] instead of using sulphur in ointment form, has the patient rub into the skin the dry sulphur powder and throw in between the sheets of the bed a half teaspoonful of the same. I have tried this plan in private practice with perfect success. It is vastly more agreeable than using an ointment. This, though a very efficient remedy, forms such a disgusting-looking mass and is so irritating that it is fit only for public practice. β-naphtol, in five to ten per cent. strength in ointment or oil, is a good remedy,

[1] New York Med. Journ., 1893, i, 432.

free from the sulphur smell, and not so irritating. Kaposi recommends it in the following form:

℞ β-naphtol., 15 parts.
Sapo.viridis, 50 "
Cretæ alb. pulv., 10 "
Adipis, 100 " M.

and Crocker says: "I can speak of it in the highest praise." It is well fitted for private practice. McCall Anderson extols styrax liquida with a double amount of lard. As the itch is very prevalent in Scotland, the doctor should know of what he speaks. Too free use of this remedy may cause a nephritis, so patients using it must be watched.

The treatment in the St. Louis Hospital of Paris is a heroic one, but is said to cure in one hour and a half. According to Fournier, the patient is scrubbed violently for half an hour with green soap; then for another half-hour the scrubbing is continued while he is in a bath; then he is rubbed with Helmerich's ointment:

℞ Potass. carbonat., ℥ss; 15
Sulphur. sublimat., ℥j; 30
Adipis, ℥iv; 120 M.

Now he puts on his clothes without removing the salve, and is discharged cured. In private practice Fournier recommends the use of a good toilet soap for the preliminary rubbings, and then Bourguignon's ointment as follows:

℞ Glycerini, 200 parts.
Gum. tragacanth., 5 "
Sulph. sublimat., 100 "
Potass. carb., 35 "
Ol. lavandulæ, Ol. menth. pip., Ol.caryophylli, Ol.cinnamomi, āā 150 " M.

This is to be followed by a bath and powdering with corn-starch. It cannot be used for children, or in extensive cases in adults where there is much excoriation.

For infants and young children, balsam of Peru is the pleasantest application we can make, it being rubbed in morning and night, either pure or diluted with sweet oil; or a mitigated form of sulphur ointment may be used. It is possible to cause constitutional symptoms by using the balsam of Peru, but this is rare.

In all cases the clothing and bedding must be disinfected—washable things by boiling, and cloth clothing by baking or by ironing with a very hot iron. All affected members of the family must be treated at the same time. An irritable condition of the cutaneous nerves sometimes lasts long after the scabies is cured, and must not be mistaken for a still active itch.

Prognosis. The prognosis is always good, provided the applications are made thoroughly enough.

Scall or Scalled Head. See Favus.

Scarlatina. Scarlet fever is an acute contagious eruptive disease with an incubation period of one day to two or three weeks, with an average of eight days. It is characterized by a quick rise of temperature at the beginning, redness of the fauces, a strawberry tongue, and the appearance of a fine punctate scarlet rash, which, first appearing on the neck, chest, and flexures of the joints, rapidly spreads over the whole body. The redness may be even over all, so as to give a boiled-lobster appearance to the skin; or the red points may be distinct, although close together. The redness usually disappears on pressure. Vesicles may appear. A great deal of constitutional disturbance and prostration usually attend the eruption, but convalescence is well established in the second week in uncomplicated cases. Abundant desquamation follows the subsidence of the eruption, which continues for days or weeks.

Diagnosis. There is often a striking resemblance between scarlatina and erythema scarlatiniforme, and some other erythemata. (See Erythema.)

Scherende Flechte. See Trichophytosis capitis.

rfluss. See Seborrhœa.

Schuppenflechte. See Psoriasis.

Scissura Pilorum. See Atrophia pilorum propria.

Sclerema. See Scleroderma.

Sclerema Neonatorum. Synonyms: Scleroderma neonatorum; Induratio telæ cellulosæ; (Fr.) Algidité progressive, L'endurcissement athrepsique; (Ger.) Das Sclerem der Neugeboren.

This happily rare disease was first differentiated from œdema neonatorum, according to Crocker, by Parrot, in 1877. It may be primary, but most often it is secondary to some exhausting disease, such as pneumonia or intestinal catarrh. It may be present at birth, and rarely occurs after the first ten days of life. It is characterized by hardness of the skin, which generally at first is circumscribed and affects the leg. It may be diffused from the first, or it soon becomes so, and extends to the lumbar regions, back, chest, and so all over the body, becoming universal by the fourth day. It may begin on the face, and it may stop before becoming universal. It may be but slightly developed on the chest. At first the skin is pale and waxy; later, it becomes livid and cold, and the child looks as if frozen. The skin becomes attached to the underlying parts, smooth, tense, and does not pit on pressure. Movement is impossible for the child, and the body may be raised without bending a joint. When the face is affected it is impossible for the child to nurse. Its respirations are greatly reduced in number, its pulse falls to sixty per minute, its temperature is below normal, its breath is cool, and it dies within a week. The primary congenital cases are either stillborn or die in one or two days. Localized cases sometimes recover, the hardness of the skin disappearing.

Etiology. The cause of the disease is obscure. It is seen almost exclusively in foundling asylums and among the very poor. It is, therefore, a disease of depressed vitality. Langer[1] regards it as the result of solidification of the fat, which in infants contains thirty-one per

[1] Wien. med. Presse, 1881, xxii., 1375.

cent. of palmitin and stearin, that of adults containing ten per cent. The fat in infants, he says, is nearly all concentrated in the subcutaneous tissues, where it is five times as thick relatively as it is in adults. Naturally, an infant's temperature is higher than an adult's, and, if it is lowered by any depressing cause, the fat may solidify. Solidification may take place also under the action of cold, or by oxidation, as in fevers, withdrawing some of the constituents of the fat. Parrot regards the disease as one of desiccation from the drain of a diarrhœa, or the like.

DIAGNOSIS. Sclerema neonatorum is differentiated from *œdema neonatorum* by being more general in its distribution, by the skin being harder and more tense, and not pitting on pressure, and by the rigidity of the joints. *Sclerodermia* occurs at a later age than does sclerema, and the skin lacks the coldness of the latter. There are no other diseases with which sclerema can be confounded.

TREATMENT. The course of the disease is almost inevitably toward a fatal termination, and little more can be done than to keep the little body as warm as possible, to rub in oil, and to administer concentrated nourishment and stimulants. Money[1] reported a case in 1889 that was cured in six weeks by mercurial inunctions. There was no history of syphilis in the case.

Scleriasis. See Scleroderma.

Sclerodactylie. See Scleroderma.

Scleroderma. Synonyms: Sclerema seu Scleroma adultorum; Scleriasis; Dermato-sclerosis; Chorionitis; Sclerostenosis; (Fr.) Sclérème des adultes, Sclerodermie; (Ger.) Hautsclereme; Hide-bound disease.

A subacute or chronic disease, characterized by hardness and rigidity of the skin.

SYMPTOMS. The name of this disease indicates the most peculiar feature of it—that is, hardness of the skin. It may come on without apparent cause, the patient first noticing the stiffness of the skin; or it may follow exposure to dampness and cold, and be preceded by pains of

[1] Lancet, 1889, i., 526.

rheumatic nature. It may begin in any part of the skin, but has a preference for the upper half of the body. It is usually symmetrical, though it may be more pronounced on one side than on the other. Having begun, it spreads, it may be very slowly, or it may be so rapidly as soon to involve large areas of the body. It often runs a capricious course, growing better and worse, and leaving sound areas in the midst of the diseased parts. There may be one patch or a number of patches, and the patches assume many shapes, though most commonly they are elongated, running lengthwise of the limb.

There are two varieties of the disease: 1. The infiltrating form. In this there is a good deal of infiltration of the skin, which is hard, cannot be pinched up, does not pit on pressure, and is attached to the deeper structures. The appearance given to the affected part is cadaveric. In some cases there may be hard œdema. The affected part is usually on the level of the surrounding parts, though it may be slightly raised. The infiltration merges gradually into the neighboring parts, its border being ill defined and more readily felt than seen. The natural folds of the skin are obliterated, erythema may be present at first, and telangiectases are frequently observed upon the surface. Not infrequently the patch has a lilac border. The color of the skin is paler than that of the normal integument, and in some places it may be that of ivory. Some scaling may be present, or pigmentation of a mottled or diffused character may give the patch a fawn to black color. Owing to the stiffness of the skin the movement of the joints is interfered with, a state of pseudo-ankylosis being established. If the face is affected, it loses its expression, and the features become immobile. The eyelids may escape for some time; but if the disease passes on to the atrophic stage, soon to be mentioned, the eyes become wide open and cannot be closed. If the chest is much affected, respiration is interfered with. The temperature of the skin is usually lowered one or two degrees. It may be normal or somewhat elevated. Sensibility may be increased, normal, or decreased. Pruritus is at times annoying. The secre-

tions of the skin are lessened with the increase of the disease. The disease may invade all the mucous membranes.

2. The atrophic form may succeed the infiltrating form after months or years. Crocker thinks that it is probable that atrophy follows the œdematous infiltration only. When atrophy begins it is progressive, and the skin becomes dry, wrinkled, parchment-like. It is most often the upper part of the body that is affected—the face and arms. Continuous contraction of the skin produces an atrophy of the muscles under it, so that finally nothing remains of the original structures but the skin and bones, and the joints are ankylosed. The face being affected, we will find a corpse-like expression, wide-open eyes with ulcerated corneas, shrunken gums with loosened and falling teeth. The limbs being affected, slight injuries will produce ulcerations over bony prominences, and the limbs will be semiflexed. The *sclerodactylie* of Ball is scleroderma of the atrophic variety, affecting the hand and causing marked atrophy, loosening the joints, and distorting the hands, "so that the third and fourth fingers are curled up into the hand, the first and second are bent at the first phalangeal joint, while the thumb phalanges are over-distended." (Crocker.)

The general health remains unaffected in both forms, often for years; but should the disease be very pronounced, at last a marasmic condition develops and death occurs. Apart from the pruritus and feeling of stiffness, we may have no subjective sensation, excepting that pain on pressure is exquisite. At times burning is complained of. The disease, when of the infiltrated variety, tends to a slow and interrupted course toward recovery. In the atrophic variety recovery may take place. Of course, the atrophied skin will never regain its natural texture, but the disease may cease to spread and increase. At best its subject is but a sorry specimen.

Children may have scleroderma, the youngest reported case being thirteen months. In them the disease is said to run a more rapid course, both in development and recovery, than it does in the adult. Vidal[1] describes a

[1] Gaz. des Hôp., 1878, li., 939.

form of scleroderma following a lesion of the skin, such as an eczema, which gives rise to a lymphangitis, and is usually met with on the leg.

Morphœa, Keloid of Addison, is the circumscribed form of scleroderma. It occurs either as circumscribed, variously sized, oval or irregularly shaped patches, or in the form of bands, the former being the more common. It begins as a congested, red, rosy, or lilac macule, which enlarges, pales in the center, becomes hardened, and assumes the form of a characteristic patch of the disease. This patch looks like a piece of old ivory or of lard set in the skin, being of a yellowish-white color. The color may be pinkish, yellow, brown, or even black. The skin over the patch is usually smooth and easily pinched up. It may be wrinkled, or eroded in the center. It may be level with the surface of the skin, or raised above it, or sunken below it. Around it is a lilac border due to dilated vessels. When the patch is pinched between the fingers it feels firm, like leather. There may be but a single patch or a number of patches. As a rule the disease is unilateral. After a varying length of time it may disappear spontaneously, although it may remain for a number of years. There are usually no subjective symptoms, and the disease remains unchanged until it disappears. In some cases it enlarges by new patches developing at the periphery of the old one and uniting with it. Exceptionally there may be some itching or pain, and ulceration may occur. Sensation is generally preserved. The band form is usually single, and may form a depressed sulcus or a raised ridge, looking much like a cicatrix. In addition to the bands there may be atrophic spots.

The most common locations of morphœa are anywhere on the trunk, but specially on the breasts; on the head and face in the parts supplied by the fifth nerve; and on the limbs. It is not infrequently associated with other nervous phenomena, and may occur along the course of a nerve, like zoster. Nettleship[1] has reported a case in the region of the first and second divisions of the fifth nerve with paralysis of the intraocular branches of the third

[1] Trans. Clin. Soc. Lond., 1882-3, xvi., 199.

nerve, which in time had associated with it hemiatrophy of the whole of the left side of the head. There is no disturbance of the general health. The secretion of sweat over the patches may be normal, lessened, or absent. When the disease disappears it may leave no trace of itself; or it may be followed by pigmentation, or even permanent atrophy, not only of the skin, but also of the muscles. A form of leprosy has been wrongly named morphœa.

ETIOLOGY. Women are far more often the victims of sclerodermia than are men—three to one. It is most common in young and middle-aged adults. Apart from this, we are in uncertainty as to the true cause, though rheumatism, gout, exposure to cold and heat, bad hygiene and poor food, and neurotic influences have each been found in apparent causative relation to the disease. At the foundation of the trouble there is supposed to be some defect in the nervous system, not improbably in the vaso-motor centers.

DIAGNOSIS. There is no other disease of the skin with which diffused sclerodermia could well be confounded, excepting *sclerema* or *œdema neonatorum*, or cancer en cuirasse. The age at which the first two occur—namely, the first few days of life—would throw them out. *Cancer en cuirasse* is more rapidly fatal in its course, is at first or soon marked by subcutaneous nodules that tend to break down and ulcerate, and is accompanied by lancinating pain.

Keloid differs from morphœa in having claw-like processes, in being more vascular and harder, and in wanting the old-ivory color and lilac border. *Leprosy* has anæsthetic patches, which morphœa has not. *Vitiligo* is a pigment change only, and has no other symptoms.

TREATMENT. It is doubtful if treatment is ever directly of avail. At best it is unsatisfactory. A general symptomatic treatment with tonics, good diet, and maintenance of the body heat is indicated. Galvanism, inunctions of the skin with oil, and massage may be tried. West[1] has reported amelioration in one case by the

[1] Trans. Path. Soc. Lond., 1883, xvi., 252.

external use of chaulmoogra and olive oils. Graham[1] advises the use of antirheumatic remedies. Hyde has obtained benefit by the use of common salt, either moistening it with warm water until it is partially dissolved, and then rubbing it briskly over the entire surface of the body excepting the face, and then washing it off with water of decreasing temperature until cold water is used; or a warm tub or sponge bath is taken containing one-quarter of a pound of salt to the gallon. I have seen one case improved by inunctions of vaseline containing ten per cent. of salicylic acid.

PROGNOSIS. While recovery may take place, it is uncertain as to its occurrence. Death may result. In children the prognosis is more favorable.

Scleroderma Neonatorum. See Sclerema neonatorum.

Scleroma Adultorum. See Scleroderma.

Sclerostenosis. See Scleroderma.

Scrofulide Boutoneuse Bénigne. See Prurigo.

Scrofulide Crustacée Ulcéreuse. See Tuberculosis cutis.

Scrofulide Erythémateuse. See Lupus erythematosus.

Scrofulide Tuberculeuse. See Lupus vulgaris.

Scrofuloderma. Modern pathology has led, or is leading, us to use the term tubercular as synonymous with scrofula, and a number of dermatoses that were for many years regarded as scrofulodermata have been proven to be due to the bacillus tuberculosis. The most brilliant example of this is lupus vulgaris. Many of the scrofulides of the French have been shown by more careful observation to belong to various other well-recognized forms of skin disease. The marks of a scrofulous affection are, according to Bazin: (1) the involvement of the deeper layers of the skin; (2) the sharply circumscribed character of the lesions; (3) the absence of pain; (4) hypertrophy followed by atrophy of the affected parts; (5) the reddish, violaceous, or livid color of the lesions; and (6) indelible cicatrices left by the same.

[1] Journ. Cutan. and Gen.-Urin. Dis., 1886, iv., 332.

In the present condition of our knowledge of the subject, and in a book of this sort, it is impossible to do more than to place here a few affections of the skin that do not fit in under other well-established diseases, while premising our remarks by saying that they are either really instances of cutaneous tuberculosis or due to its toxins, or will eventually be taken out of their present position as scrofulodermata. In all of them we have, at the same time, that general make-up of the individual that long has been recognized as scrofulous. The patients are mostly young subjects, flabby of flesh, with pasty or doughy complexions or transparent skins, thick upper lips, perhaps with clubbed fingers, a marked tendency to chronic catarrhal inflammations of all the mucous membranes, chains of enlarged glands in the neck, and perhaps with some old or present bone lesions. They are usually dull and apathetic, but may be unusually intellectual, and are prone to die with tubercular lung diseases.

The most common scrofuloderm is that resulting from a suppurating caseous gland, usually of the neck—*the scrofulous ulcer*. The gland, before it breaks down, implicates the skin over it, and it becomes of violaceous or livid color, attached to the underlying parts. By and by the skin gives way at one or several points; the sanious, unhealthy pus escapes through the openings; these enlarge, coalesce with others, and so form the characteristic ulcer. This has undermined edges; is of irregular shape; its base is covered with flabby granulations; it discharges a thin, sanious pus; shows little tendency to crusting; is almost painless, and heals very slowly, leaving a puckered, disfiguring scar that is often bridled, one with bands of connective tissue running across the site of the ulcer, under which a wooden tooth-pick, or the like, can be passed. Only one gland may be affected, or there may be a number of them that enlarge and break down. This same form of ulcer may originate from what is called a *scrofulous gumma*, a subcutaneous tubercle independent of the glands, that slowly enlarges to a soft tumor, breaks down, and ulcerates. These tumors frequently occur on

the limbs, and the bones may be involved in the destructive processes set up.

While this is the most common scrofuloderm, we occasionally meet with two forms described by Duhring—*the large* and *the small pustular scrofuloderm*. The former has "large, rounded, ovalish, or irregularly shaped, yellowish, flat pustules, with a deep-red or violaceous areola." This begins to crust in the center, and the crust is usually flat and scanty, brownish and adherent. Underneath it is an ulcer with the characters and course of those just described. There may be one, two, or more lesions. The small pustular scrofuloderm "consists in the formation of pinhead- and small split-pea-sized, disseminated, yellowish, flat pustules, with usually a raised, violaceous areola." These crust over with depressed yellowish or gray adherent crusts, which when removed, or when they fall off, leave depressed, punched-out scars resembling variola. Their course is very chronic and painless. They occur upon the face and extremities of strumous individuals. This form is probably the same as that now called acne necrotica.

ETIOLOGY. The causes of these scrofulodermata are those of the strumous state plus infection by the tubercle bacillus, and need not be gone into here. They are most commonly met with in early life.

DIAGNOSIS. The scrofulous ulcer differs from that of *lupus vulgaris* in an entire absence of the characteristic lupous tubercles, and in its history of beginning in a caseous gland. Moreover, in lupus we do not have, as a rule, the pronounced strumous condition that we have in the scrofuloderm. The pustular scrofuloderms sometimes resemble *syphilis*, but there is an absence of other signs of syphilis, and the presence of the strumous state. Moreover, the pustular syphilide is generally far more disseminated than is the scrofuloderm; its course is far more acute; it yields more readily to treatment, and leaves a smoother, less disfiguring scar.

TREATMENT. The treatment of the ulcers, as well as the softening glands, is upon surgical principles. The regulation of the diet and hygiene of the patient, and the

administration of cod-liver oil, iron, the compound syrup of the hypophosphites, or other tonic, is the most essential part of the medicinal treatment. Locally, to the pustular scrofuloderms we may apply iodoform ointment, aristol, or other antiseptic powder, or mercurial ointments or lotions. Crocker speaks well of chaulmoogra oil emulsion in the dose of ten to thirty minims, combined with its external use as an ointment in the strength of one part to three.

Scrofuloderma Verrucosum. See Tuberculosis verrucosa cutis.

Scurvy. See Purpura.

Sebaceous Cyst. Synonyms: Atheroma; Steatoma; Wen.

These innocuous little tumors may occur anywhere on the body, but are most common on the scalp, face, neck, and back. They vary in size from that of a millet-seed

FIG. 66.

Sebaceous cysts of scalp. (HYDE.)

to that of an orange. They may be rounded, flattened, or hemispherical. There will be found in many of them a small opening, out of which some of their contents may

be pressed. The skin over them may be of normal color, pale on account of pressure, or red if the cyst becomes inflamed. They may be elastic and doughy to the touch, or firm, or soft, according to the condition of their contents, which may be fluid and honey-like, or cheesy. They tend to grow slowly, and give no trouble except by the deformity they cause. In exceptional cases they may become inflamed and ulcerate. The hair is usually absent over them when they occur on the scalp. Cysts of similar nature may be found in locations where there are no sebaceous glands, and even under the mucous membranes. These are called *dermoid cysts*, and are supposed to be left over from fœtal life. They frequently contain hair and teeth.

ETIOLOGY. Most cysts are due to distention of a sebaceous gland. They occur in both sexes in adult life, being rare in children. The origin of dermoid cysts is undetermined. Indeed, considerable uncertainty surrounds the pathology of all of them.

DIAGNOSIS. They must be distinguished from fatty tumors and gummata. *Fatty tumors* are firmer and more doughy than cysts, and are more often lobulated, occur but seldom on the scalp, and are rarely multiple. *Gummata* are more rapid in their growth, are attached to the skin, and tend to break down and ulcerate.

TREATMENT. Complete excision of the tumor, taking particular care to remove the whole sac, is the only treatment to be considered.

Seborrhagia. See Seborrhœa.

Seborrhœa. Synonyms: Stearrhœa, Steatorrhœa, Seborrhagia, Fluxus sebaceus, Acne sebacea, Pityriasis, Ichthyosis sebacea, Tinea amiantacea seu asbestina, Eczema seborrhoicum, Lichen circinatus; (Fr.) Acné sébacée, Acné fluente; (Ger.) Schmeerfluss, Gneis; (Ital.) Seborrea.

A functional disorder of the sebaceous glands, in which there is a hypersecretion of sebaceous matter, which may be of too fluid or too solid consistence, and forms either an oily coating or greasy crusts on the skin.

SYMPTOMS. Normally the sebaceous glands secrete

only sufficient oil to keep the skin soft and supple. This normal oil is not visible to the naked eye. Under certain imperfectly understood conditions the glands secrete a too fluid and abundant oil that is readily seen as an oleaginous coating of the skin. This form of seborrhœa is called *seborrhœa oleosa*, and by many authorities is now declared to be the only form of seborrhœa. By others, and perhaps the majority, it is thought that under certain other equally imperfectly understood conditions the secretion of these glands is not only too abundant, but also too consistent. Then the sebaceous matter cakes upon the skin in the form of more or less thick plates or masses, and to this condition the name of *seborrhœa sicca* is given. The latter form is regarded by those who believe that there is but one form of seborrhœa as seborrhœal dermatitis or eczema. In deference to the older teachings, both forms will be described.

The most common locations of seborrhœa are, naturally, those regions where the sebaceous glands are the largest or most numerous, namely, the scalp, the chest, the interscapular region, and the face.

Seborrhœa oleosa, while it may occupy any or all of these regions, is usually subjected to us for treatment only when it occurs upon the face. Here it is seen most often on the nose, where it forms a greasy coating. At times this is so slight as to be felt rather than seen, imparting a slippery sensation to the finger. At other times it is so abundant that it can be seen at a distance as drops or beads of oil, and when it is removed with a cloth or blotting-paper it leaves an oily stain upon it. When it is wiped off it at once reforms. As the greasy skin catches the dust, the face is apt to look dirty. At times the skin of the nose may be hyperæmic. The forehead is, likewise, a not uncommon site for this form of seborrhœa. It may occur on the scalp, and render the hair unusually oily. It is most often noticed when the patient is bald. It is apt to cause alopecia. Upon the nose it may occur as the only disease of the skin. Upon the forehead and nose it is not an unusual accompaniment of acne. Acne and comedones may complicate the disease in any location.

Seborrhœa sicca occurs with much greater frequency than does the oily form of the disease. We are called upon to remove it from all the regions already mentioned as the locations for the manifestations of seborrhœa. It most usually appears in the form of yellowish or grayish fatty plates or masses, which when taken and rubbed between the fingers impart a greasy feel. Upon the scalp it constitutes one form of dandruff. Here it may be general, involving the whole scalp; or it may locate itself in certain places in a more pronounced way than in others; or it may take the form of rings. The hair is dry, and after a time, the seborrhœa continuing, it begins to fall, and at last baldness is established.

In this form of seborrhœa the hairy regions are especially affected, and we find it in the eyebrows, bearded portions of the face, and the hairy portions of the chest. The axillæ and pubes are rarely affected. In all these places it presents similar appearances—yellowish or grayish fatty plates. Upon the chest it is not uncommon to see the fatty matter in little heaps, piled up, as it were, about the mouths of the hair follicles. Close observation will show that the follicle mouths are wider open than they should be. As in the oily form, the skin feels greasy, and acne and comedones may be present. The interscapular region is frequently affected, and both here and on the chest the disease often takes the form of round or irregularly shaped patches which look as if they were covered with a brownish-yellow varnish. This is the *seborrhœa corporis* of Duhring and the *lichen circinatus* of the older English authors.

Aside from the appearance of the fatty crusts and a slight amount of itching when the patient is warm, this form gives rise to no symptoms. When the crusts are removed the underlying skin is of normal appearance. It may be slightly paler than it should be, but it is never moist. What the patient complains most about is that flakes from the crusts, becoming loosened, fall upon the clothing and make it look as if powdered. If the patient happens to be bald, he does not find the yellowish fatty crusts upon his bald head desirable. But the most serious

aspect of the case is that if the disease is not cured it is very sure to cause the hair to fall, especially if the patient is at all predisposed to baldness.

There is a second variety of seborrhœa sicca, in which a varying amount of dermatitis is added to the seborrhœa. Then there will be a rim of redness about the fatty crust, and when the crust is removed from the skin the underlying part will be seen to be red. In this variety there will be far more decided itching and burning than in the preceding variety. It is to be noted that although the skin is red, it is always dry and never infiltrated, in these respects differing from eczema.

Upon the nose this variety of seborrhœal dermatitis forms a yellow plate with a red line about it. At times this plate may be extensive enough to cover the whole nose. More frequently the disease is limited to the furrows behind the alæ nasi, and then assumes the form of fatty plates upon a good deal of underlying redness. The eyebrows and bearded portions of the face are also quite commonly affected, but rather as a diffuse redness combined with a branny scaling than as a solid plate surrounded by a red line.

Besides the regions already mentioned as the usual locations of seborrhœa, we meet with the disease also upon the ears (in the tragus and behind the ears) and in the anal fold. The scalp is, however, by far the most frequent location of the disease, and here it may exist alone for years. Whenever it exists elsewhere it is sure to be found at the same time upon the head.

In infants the disease is very common, taking the form of thick crusts upon the scalp that are often of a dirty-gray color. These give the careful mother a good deal of annoyance, she being in great dread lest some one should think that she is not careful to keep the precious baby clean. This form of the disease is usually the remains of the vernix caseosa.

Etiology. The usual etiological factors of seborrhœa, as given in the text-books, are debility, chlorosis, constipation, and a number of other things, indicating that the condition of the patient is below par. Of course, the ability

of these to cause seborrhœa is questioned; but that they are quite capable of aggravating the disease I have no doubt. The disease affects all classes and conditions of men, all ages, and both sexes.

There are many things that seem to indicate a contagious element in the etiology of the disease. Cases have been reported in which a husband or wife has contracted dandruff after marriage, he or she having been, before, free from the same. The experiments of Lassar and Bishop point in the same direction. They took the scales from the head of a student who was losing his hair, and, having made a pomade of them with vaseline, rubbed the same into the back of a guinea-pig, and the pig became bald. Up to two years ago we accepted without question the theory that seborrhœa is a functional disease of the sebaceous glands. This is now doubted by some authorities. Unna teaches that the process is inflammatory from the start, and that the oil that fills the epithelial scales comes not from the sebaceous glands, but from the sweat glands. What we have called seborrhœa sicca he would have us call, for the present at least, *seborrhœal eczema.* (See Eczema seborrhoicum.) He regards it also as parasitic.

In support of his thesis he presents us with microscopical studies and certain arguments. His work has been reviewed by other competent pathologists, and his observations have been substantiated by their findings. His proposition that the sebaceous glands are not responsible for seborrhœa has not been accepted generally. What is called seborrhœa oleosa, Unna believes to be nothing more than a hyperidrosis, to which he gives the name of *hyperidrosis oleosa.* This view he must take of necessity, on account of his theory of the office of the sweat glands.

It is affirmed that seborrhœa is due to a micro-organism. Brooke, of Manchester, believes that, to the parasite of seborrhœa without dermatitis, another parasite adds itself, to produce the dermatitis and the ring formation. For further information the reader is referred to the article on eczema seborrhoicum.

Diagnosis. The diagnosis of seborrhœa sicca is usually easy. It is to be recognized by the presence of fatty

grayish or yellowish plates or crusts, seated either upon a normal or slightly reddened skin. These crusts or plates differ from those met with in *eczema* in being more readily removed, and in imparting to the finger a greasy feel. Moreover, the crusts of eczema are of a more solid consistence, being formed by the drying of an almost mucilaginous discharge upon the skin. When eczema occurs upon the head the exudation glues the hairs together. In seborrhœa the hairs are not glued together, but are dry and powdery. In eczema there is more or less itching at all times, while in seborrhœa the itching comes on most generally when the head is hot, as from artificial lights, sweating, and the like. In eczema there is moisture or a strong tendency thereto. In seborrhœa moisture is never seen.

Psoriasis is another disease with which seborrhœa sicca is apt to be confounded, as it, too, occurs in the form of powdery scales and crusts upon the scalp. If a case presents itself with these conditions upon the head alone, we may be very sure that we have to do with a case of seborrhœa, as psoriasis rarely exists upon that region alone. Seborrhœa usually occurs diffusely, while psoriasis occurs in the form of circumscribed patches. The crusts of seborrhœa are yellowish or grayish, while those of psoriasis are of a silvery hue. In some cases, however, seborrhœa will occur in circumscribed patches, and the crusts of psoriasis may be of a grayish hue.

When seborrhœa sicca occurs upon the chest and back in the form of rings with scaly centers, we have before us a more difficult problem in diagnosis. Now we must decide whether we have to do with a seborrhœa, a ringworm, or a pityriasis rosea. The resemblance to *ringworm* is often very striking, but ringworm does not, as a rule, occur in so diffuse a manner. If, at the same time with the lesion on the chest, we find other lesions on the back between the shoulder-blades, we may be quite sure that the case is one of seborrhœa. Happily in any doubtful case we have a sure resort in the microscope. If the case be one of ringworm, we will surely find the trichophyton. Upon examining the scalp, if the disease be seborrhœa,

we will surely find plain evidence of it there. There should be no difficulty in recognizing the presence of a ringworm on the scalp.

In the differential diagnosis from *pityriasis rosea* we are deprived of the kindly aid of the microscope. Here, too, the occurrence of seborrhœa on the scalp will aid us in our decision. Moreover, pityriasis rosea is generally more diffused over the trunk than is seborrhœa, and occurs also on the arms and abdomen. By close inspection we may trace the development of the disease from its beginning as a small red spot through its successive growth into the typical oval to annular patch with its withered parchment or chamois-leather-like looking center. It is scaly, never crusted. In some cases, however, the diagnosis will remain somewhat doubtful.

TREATMENT. The treatment of seborrhœa is simple. It is somewhat in favor of the parasitic theory of the origin of the disease that the drugs that are most efficacious in its cure are active antiparasitics. In my hands by far the most satisfactory remedy has been sulphur. After the removal of the crusts by means of any oil or grease (this should be done the first thing whatever remedy is chosen), the sulphur is to be applied in the strength of a drachm of the precipitated sulphur to an ounce of rose ointment. It should be well rubbed into the scalp, and the application repeated every night for one week. It must be remembered that the remedy is to be applied to the scalp and not to the hair, and that it is necessary to use only a very little of the ointment. After one week's use of the sulphur the head is to be washed with soap and water, and the oil, or salve, immediately reapplied. During the second week it will be sufficient to make the application every other night. Thus the treatment is to be continued, the number of applications being reduced until they are made but once a week. By this time the disease will usually be cured. The patient is to be cautioned that relapses are likely to occur, and therefore it will be best for him to keep a supply of his oil, or salve, on hand, so as to attack the trouble as soon as it shows itself.

The objections to sulphur are two: it has a slight odor,

and it leaves a slight yellow powder on the scalp. The first objection is overcome by the exhibition of the sulphur in rose ointment. The second is lessened by cautioning the patient not to use the application too freely, and by having him wash the head more often.

The ointment recommended by my distinguished friend, Dr. Bronson, is a very elegant as well as efficient substitute for the sulphur. It is

℞	Hydrarg. ammon.,	℈j–ij;	5–10	
	Hydrarg. chlor. mitis,	℈ij–iv;	10–20	
	Vaselini,	ad ℥j;	ad 100,	M.

This is to be used in the same manner as the sulphur ointment.

While one or the other of these will bring the case to a happy issue, it is well to have a variety of means at command. H. R. Crocker[1] commends:

℞	Ac. acetici,	℥ss–j;	15–30	
	Resorcin.,	℈j;	4	
	Aq. cologniensis,	℥ij;	60	
	Glycerini,	℈j;	4	
	Aquæ rosæ,	ad ℥viij;	ad 250	M.

Some other remedies are salicylic acid in castor oil, three per cent. strength; resorcin in oil, diluted alcohol, or vaseline in three to ten per cent. strength; or a solution of hydrate of chloral, a drachm to the ounce. A favorite formula is:

℞	Hydrarg. bichlor.,	gr. ij;	1	
	Resorcin.,	℥j;	3	
	Ol. ricini,	℥j;	3	
	Alcohol.,	ad ℥iv;	ad 100	M.

This will cause an exfoliation of the scalp in some cases.

For a soap, both for cleansing and stimulation, nothing is better than the tincture of green soap. If the scalp is peculiarly irritable, then it is best to use a milder soap, such as Pear's glycerin soap.

The treatment of seborrhœa of the body and face is

[1] Clin. Journ. Lond., 1897, x., p. 81.

upon the same lines as that of the scalp, only that on the body we can use an ointment instead of an oil.

For the seborrhœa of infants usually all that is required is to keep the scalp well oiled with olive oil. If this does not cure, then a mild sulphur ointment with vaseline may be used.

For seborrhœa oleosa dabbing ether on the part will most promptly remove the greasy look. Washing with soap and water will act as a stimulant. Powdering with sulphur and starch, or using a three per cent. solution of resorcin in alcohol and water, will tend to cure.

In all forms general treatment will be called for if the patient is out of tone. General tonic treatment is required in nearly all cases of seborrhœa oleosa.

Under Alopecia furfuracea will be found further directions as to the treatment of seborrhœa of the scalp when it has led on to baldness. See also Eczema seborrhoicum, which is that which I have here described as seborrhœa sicca, in deference to the older teachings.

PROGNOSIS. Seborrhœa oleosa is often recovered from when the patient is in good general condition. Seborrhœa sicca is usually readily cured, but is very sure to return, so that the patient must keep by him for further use any remedy he has found efficacious.

Seborrhœa Congestiva. See Lupus erythematosus.

Seborrhœa Nigricans. See Chromidrosis.

Shingles. See Zoster.

Siderosis. A defacement of the skin due to the entrance into it of small particles of iron or steel, producing blue-black marks. It is seen in ironworkers.

Sommersprosse. See Lentigo.

Spargosis. See Elephantiasis.

Spedalskhed. See Lepra.

Sphaceloderma. See Dermatitis gangrænosa.

Spider Cancer. See Telangiectasis.

Spiradenoma. See Adenoma of sweat glands.

Spitzes Condylom. See Verruca and Syphilis.

Stearrhœa. See Seborrhœa.

Steatoma. See Sebaceous cyst.

Steatorrhœa. See Seborrhœa.

Stigmasie seu **Stigmata.** See Hæmatidrosis.

Stinkschweiss. See Bromidrosis.

Stonepock. See Acne.

Striæ et Maculæ Atrophicæ. See Atrophoderma striatum et maculatum.

Strophulus. See Miliaria.

Strophulus Albidus. See Milium.

Strophulus Prurigineux (Hardy). See Prurigo.

Sudamina. See Miliaria.

Sudatoria. See Hyperidrosis.

Sudor Urinosus. See Uridrosis.

Sueurs Colorées. See Chromidrosis.

Summer Eruption of Hutchinson. See Hydroa vacciniforme.

Sweating, Excessive. See Hyperidrosis.

Sycosis. Synonyms: Sycosis non parasitica; Sycosis menti; Sycosis barbæ; Mentagra; Acne mentagra; Folliculitis barbæ; Folliculitis pilorum; Herpes pustulosus mentagra; Lichen menti; Acne sycosis; (Fr.) Sycosis non parasitaire; Dartre pustuleuse mentagre; Adenotrichie; (Ger.) Bartfinne, Bartflechte; Fikosis; (Eng.) Barber's itch.

An acute or chronic follicular and perifollicular inflammation of the long hairs, chiefly affecting the bearded portions of the face; characterized by an eruption of papules, pustules, and tubercles perforated by hairs; by the formation of infiltrated patches; and by a greater or less amount of crusting. Sometimes the disease is so intense as to form abscesses.

the eyebrows will be similarly affected, and a blepharitis will be present. When the case is watched for a time marked exacerbations will arise often without apparent cause, last for a few days, and then the disease will sink into a subacute condition. When the disease affects the vibrissæ of the nose, by extension from the upper lip, the Schneiderian membrane becomes swollen and exquisitely sensitive. The disease tends to run a chronic course, lasting for years.

ETIOLOGY. The etiology of the disease is not settled. It is not very common, perhaps one case in three or four hundred. It is doubtless contagious in some cases, and transferred by the agency of the barber shop. It is seen in men almost exclusively, as we might expect, as it is the beard that is most often affected; and attacks them most frequently between the ages of twenty-five and fifty. It affects all classes and conditions. Most of its subjects are in poor general condition.

Eczema is often a forerunner of sycosis, the one process passing over into the other. A nasal catarrh is the cause of the majority of cases occurring on the upper lip. Shaving with a dull razor against a stiff beard is said to be sometimes an exciting cause, though those who do not shave are by no means exempt from the disease. An irritant applied to the skin may excite it, such as exposure to intense heat, the dust of a workshop, cosmetics, and the like. Exposure to inclement weather is regarded by Wilson as the principal cause. One of the worst cases I have met with was directly traceable to a poultice applied to the face for the relief of a neuralgia. Given a hyperæmic or irritable condition of the skin of the face, arising from any internal or external cause, the hairs, especially if they are coarse, may excite the disease, acting as irritants when touched or moved.

Hebra thinks that some cases may be due to an abnormality in the growth of new hairs. Wertheim ascribed the inflammation to irritation of the hair follicle by hairs whose diameter was, relatively, too large for their follicles. The staphylococcus pyogenes is found in relation with most cases of sycosis, but this would prove inoperative unless the

in their follicles, and when pulled upon give rise to pain, and if extracted their root sheaths will appear as clear glassy cylinders. Later, as pus forms more abundantly in the peri-follicular tissues, and the follicles themselves are involved in the process, the hair becomes loosened and easily extracted, when its root sheath will be found swollen with pus. If the pus-production is excessive, the hairs will fall of themselves or upon the slightest traction. When this occurs the hair papillæ may be so damaged that no new hairs will form. In chronic cases the beard is markedly thinned, though permanent loss of hair is the exception.

The disease may attack any part of the bearded face, and may be met with in other hairy regions, as the neck, the eyebrows, scalp, axilla, and pubes. But the beard is by far most often the site of the disease, the other situations being affected in the order in which they are named. Occurring in the beard, it may be limited to a single region and show no tendency to spread. Thus it is met with very frequently upon the upper lip alone, or at times upon the cheeks alone. When it affects the upper lip alone it is always preceded by nasal catarrh, and takes the form of a diffused dermatitis with much thickening of the lip and some crusting. It may attack the whole bearded face in an acute outbreak, or it may involve it by extension from a limited area during a number of successive outbreaks. In chronic cases it is usually symmetrical. The course of the disease is chronic and made up of a number of acute exacerbations. If left to itself, it may produce a good deal of deformity, the tubercles and pustules breaking down, ulcerating, and leaving cicatricial tissue and more or less baldness, though this is exceptional.

A typical case of sycosis presents the following appearance: upon a single region, two or more regions, or upon the whole bearded portion of the face there will appear a number of isolated or grouped papules, tubercles, and pustules pierced by hairs. The skin about the lesions is reddened and swollen, it may be indurated, and there is a slight amount of crusting. There is no tendency for the disease to spread to non-hairy parts, but very commonly

the eyebrows will be similarly affected, and a blepharitis will be present. When the case is watched for a time marked exacerbations will arise often without apparent cause, last for a few days, and then the disease will sink into a subacute condition. When the disease affects the vibrissæ of the nose, by extension from the upper lip, the Schneiderian membrane becomes swollen and exquisitely sensitive. The disease tends to run a chronic course, lasting for years.

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soil was in proper condition for its growth. Tommasoli has found a bacillus in some cases.

PATHOLOGY. The disease is primarily a peri-folliculitis, the hair follicles being affected secondarily, and after them the sebaceous glands.

DIAGNOSIS. The distinguishing characteristic of sycosis is the presence of pustules pierced by hairs. It must be diagnosed from trichophytosis barbæ, eczema barbæ, the small pustular syphiloderm, acne, and lupus. The differential diagnosis of sycosis from *trichophytosis barbæ* is as follows:

TRICHOPHYTOSIS BARBÆ.	SYCOSIS.
Begins as a small scaly spot, a superficial ringworm, and gradually involves the deeper parts of the hair.	Begins suddenly with an outbreak of papules which soon become pustules, each of which at the start involves a hair.
Has its favorite seat upon the chin and the submaxillary region; rarely attacks the upper lip.	Its favorite seat is the upper lip, and sometimes it alone is involved. Involves the hairy portions of the face more generally, and is often symmetrical.
The eruption consists of tubercles and nodules which tend to group, and are studded with a number of hairs. The internodular portions of the skin often remain unaffected.	The eruption consists of papules and pustules, each of which is pierced by a single hair, and they show no disposition to group. The intervening skin is generally reddened, and may be diffusely infiltrated; and abscesses may form.
Is a deep inflammatory process so soon as the hairs become affected.	Is a more superficial inflammation.
Hair is diseased primarily, and is twisted, split, and broken. May readily be removed by slight traction and without pain. Its root is often dry	Hair diseased secondarily, and comes away at first with difficulty, causing much pain. Later is easily removed and its root is swollen with pus.
Subjective symptoms slight, may be only slight pruritus.	Subjective symptoms of pricking, burning, and tension of the part. These are often intense and attended by swelling of the face.
Patches of ringworm often present on other parts of the body, and sometimes the disease extends upon the neck or face.	Limited in most cases to hairy parts of face. No tendency to extend on non-hairy parts of face or neck.
Hairs and scales loaded with the trichophyton fungus.	No fungus present.
Is a progressive disease, and when cured not liable to relapse.	The course of the disease made up of a number of acute outbreaks. Liable to relapse.

The differential diagnosis from *eczema* of the beard cannot be made with so much certainty, and often we must remain for a while in doubt as to the true nature of the case. At times sycosis is left by a preceding eczema, and we may meet with a case in the transition-stage when a

sure diagnosis would, manifestly, be impossible. A typical case of pustular eczema is attended by a far greater amount of crusting than is sycosis, and the crust is of a more greenish or blackish color. Upon removing the crust in eczema a moist and oozing surface will be exposed, while in sycosis we will do no more than remove the tops from a number of pustules. In eczema the pustules break down more readily than in sycosis, and they are not so accurately located about the hairs. In eczema the whole surface of the skin is involved, and the process tends to extend upon non-hairy parts of the face. While exceptionally eczema is confined to the hairy portion of the face, this is always so in sycosis. The duration of the disease will at times help us to a diagnosis, sycosis being far more chronic than is eczema. In *syphilis*, when the beard is involved, we will find pustules upon other portions of the body, and the history will help us to a correct conclusion. Further, the pustules or papules of syphilis are grouped in circles and segments of circles, are of a peculiar color, and their development is painless and comparatively slow. *Acne* is scattered about the whole face, and is usually met with in young persons. Comedones are present, and the papules, pustules, or tubercles have no definite relation to the hair. The course and history of *lupus* are so different from those of sycosis that it is hardly possible for them to be confused. In lupus vulgaris we have the characteristic brown tubercles, which do not contain pus, are not confined to the hairy portions of the face, generally begin in early life, and tend to ulcerate or to be absorbed and leave behind cicatrices.

TREATMENT. The treatment of sycosis is both general and local. While many cases will yield to local treatment alone, there are quite as many, if not more, which require general treatment. The surroundings of the patient must be inquired into, and his mode of life, and we should endeavor to put him in as good a hygienic condition as possible. He should be advised against exposing himself to dust and wind, and then only with his face powdered or protected with ointment, and even against smoking, especially in a wind where the smoke blows against the face.

The proper regulation of the diet is important. Many cases will improve if we stop their tea, coffee, hot drinks of all sorts, ale, beer, and spirits. If the digestive process seems at all embarrassed, it is well to put the patient on a light diet for morning and evening, and direct him to take his principal meal at noon, eating meat only at that time. Anything that is known to him to be indigestible must, of course, be prohibited. In a word, the diet and hygiene of the patient should be regulated.

What medicines we should administer will depend upon the stage of the disease. In the acute stage, when there are much swelling and inflammation, a good dose of blue pill, calomel, or some other active cathartic is to be ordered, to be followed by an alkaline diuretic. When pustulation is active the sulphide of calcium or calx sulphurata may do good. Piffard recommends this very highly, giving one-tenth of a grain two or three times a day.

Small doses of calomel, one-tenth of a grain, three times a day, for two or three days at a time, are useful in relieving the congestion of the skin. In chronic cases iron, cod-liver oil, and other tonics are indicated if there is a state of debility. Arsenic is advised in very obstinate cases. If indigestion is present, we must address our remedies to its relief before we give calcium, arsenic, or other remedy for the disease proper, and then we will probably have no need of so-called specifics.

The local treatment must vary with the condition found, whether it be acute or subacute, and is more important than the general treatment. When the disease attacks the upper lip the nose must be examined for evidences of catarrh, and that condition treated if found.

In the management of an acute case of sycosis soothing remedies are needed. Hot water should be sopped upon the part for some five or ten minutes once or twice a day, and this should be followed, if the beard is growing, by the use of a simple oil, such as olive oil or sweet almond oil; or if the face is shaved, the zinc oxide ointment or cold cream may be used; or better still, Lassar's paste, as follows:

℞ Amyli, }
Zinci oxidi, } āā ʒij; āā 8
Vaselini, ad ℥j; ad 32 M.

Powdering the part with cornstarch, or bismuth and talc, after smearing on a little vaseline, will at times give ease and comfort.

In the early stage, if the inflammatory symptoms are not very intense, a mild white precipitate ointment will sometimes check the disease. Duhring recommends bathing the face with "black wash," followed by zinc oxide ointment with a drachm of alcohol or half a drachm of camphor to the ounce, spread on cloths and bound on; and speaks well of the oxide of zinc ointment with fifteen to thirty grains of calomel to the ounce.

When the disease has reached the pustular stage, and there is more or less crusting, the crusts are to be removed by the free use of olive oil, or oil of sweet almonds with two per cent. of salicylic acid, letting it soak in thoroughly over night and washing the part with soap and warm water the next morning. If the crusts are thick, it is a good plan to tie up the bearded face in a towel after anointing it with oil. After the crusts are gotten rid of, the hairs should be pulled out of the pustules and epilation continued until pustules cease to form. The patient must be made to understand that epilation is necessary both for the cure of the affection and the salvation of the hair. After epilating, the oxide of zinc ointment, Lassar's paste, or diachylon ointment is to be used. Shaving is recommended, but it seems to me better to content ourselves with cutting the hair short. Shaving is apt to irritate the skin, and certainly would favor the dissemination of the pus organisms. Sulphur in the form of an ointment, half a drachm to a drachm to the ounce, or in powder, will sometimes do good, but often will prove too irritating. Tilbury Fox recommends the use of the following ointment after epilating:

℞ Zinci oxidi, }
Zinci carbonat., } āā ʒj; āā 4
Ungt. aq. rosæ, ad ℥j; ad 32 M.

Instead of an ointment we may use oxide of zinc, one drachm to the ounce of linseed or other oil. Shoemaker advises the application of equal parts of oleate of mercury and olive oil.

In subacute and chronic cases a more active treatment is necessary. Here our aim is not so much to allay inflammation as to stimulate the skin. To this end we may use the soap and salve treatment of Hebra, which renders such good service in chronic cases of eczema. (See page 202.) In some cases better results will be attained by the use of diachylon ointment, or Lassar's paste with ten or fifteen grains of salicylic acid to the ounce. In very obstinate cases in which there is much thickening of the skin green soap may be kept applied to the part like an ointment. When sufficient inflammatory reaction is produced emollient measures, as in the acute stage, should be used.

Our success in treating these cases will vary with the thoroughness with which the dressings are applied. All ointments must be spread on *cloths*, not on the skin, and the dressings must be kept continuously in close contact with the affected part. Sometimes a sulphur ointment, one-half a drachm to two drachms to the ounce; an ointment of iodide of sulphur; the ointment of the ammoniate (gr. xv–xxx ad ℥j) or the nitrate (ʒj–ij ad ℥j), or the red oxide (gr. v–xv ad ℥j) of mercury will prove useful. Robinson recommends the following ointment:

℞			
Ungt. diachyli (Hebra),	}	āā ℥iss;	āā 48
Ungt. zinci oxidi,	}		
Ungt. hydrarg. ammon.,		ʒiij;	12
Bismuth. subnitrat.,		℥iss;	6 M.

He has found cod-liver oil the best local application in strumous subjects.

Behrend has obtained good results by scraping the affected parts with the dermal curette and dressing with a simple ointment or oil. All abscesses must be opened. In some cases the following ointment has given me satisfaction after other combinations have failed:

℞	Hydrarg. sulph. rubri,	gr. vij;	5	
	Sulph. sublimat.,	ʒiij;	12	
	Adipis,	ʒiss;	ad 50	
	Ol. bergamot.,	q. s.;	q. s.	M.

To be kept on constantly.

Solutions of the bichloride of mercury, 1 : 1000; or of resorcin in alcohol five per cent. strength, after shaving, may be used.

Kaposi recommends the following:

℞	β-naphtol.,	gr. xv.;	1	
	Spt. sapo. viridis,	ʒvj;	25	
	Alcoholis,	ʒiss;	50	
	Bals. peruv.,	ʒss;	2	
	Sulph. loti,	ʒiiss;	10	M.

The ammonio-sulphate of ichthyol and other drugs used by cataphoresis are commended.

Boric acid, salicylic acid, and numerous other remedies seem to do good in some cases. To assure against a relapse it is necessary to continue making applications to the skin for four or five months after apparent recovery.

Prognosis. This is one of the most obstinate of diseases. Left to itself, when once under headway it shows no tendency to get well, and has been known to last twenty or thirty years. Even under the most judicious treatment it is an obstinate disease, taking weeks or months before a cure is effected. Relapses are exceedingly liable to occur, and these sometimes show a disposition to recur at certain seasons. Unless the hair is carefully plucked from the inflamed follicles permanent baldness may be caused. But the disease is not dangerous to life, and it is curable.

Sycosis Contagiosa. See Trichophytosis barbæ.

Sycosis Capillitii seu **Framboesia.** See Dermatitis papillaris capillitii.

Sycosis Parasitica. See Trichophytosis barbæ.

Syphilis.[1] Synonyms: Malum venereum; Lues; Morbus

[1] In the description of the syphilides I have followed very closely those given by Prof. G. H. Fox in his *Photographic Illustrations of Skin Diseases*, Treat, New York; and by Prof. R. W. Taylor in his *Pathology and Treatment of Venereal Diseases*, Lea Brothers & Co., Philadelphia. To both of these gentlemen I would extend my grateful thanks for the permission to use their books that was granted to me.

Gallicus, seu Italicus, seu Hispanicus, seu Neapolitanus, seu Indicus; (Fr.) Vérole, or Grosse vérole; (Ger.) Lustseuche; (Eng.) Bad disorder, Pox.

Whole books have been written upon this disease. Here we can give only a brief outline of the disease, and that as it affects the skin alone. For a further account of the disease the reader should consult the larger special treatises.

Symptoms. Syphilis may be acquired or hereditary. It is acquired by local infection, the first manifestation of which is the appearance of the initial lesion, commonly called the chancre or hard sore. In probably ninety per cent. of the cases this initial lesion is located on the genitals, and in the vast majority of these its site in males is the glans and prepuce. But the initial lesion may be found on any part of the body, and within the mucous cavities. According to a table of one hundred and ninety-eight extra-genital lesions compiled by Pospelow,[1] the female breasts were affected in sixty-nine cases; the lips in forty-nine cases; the throat in forty-six cases; and then in very much less frequency the gums, tongue, chin, eyelids, nose, trunk, anus, arms, and legs. Some obscure cases of syphilis are due to the initial lesion being in the urethra or upon the cervix uteri or deep in the throat, and thus escaping detection.

The *initial lesion* appears within two to six weeks after inoculation with the syphilitic poison; usually the interval is less than four weeks; exceptionally it may be ten weeks. This is the period of incubation. Opinions are divided as to whether the initial lesion is a purely localized lesion or the expression of a general constitutional infection that first declares itself at the point of inoculation. It appears to me that the weight of the argument is altogether on the side of the last opinion. The initial lesion may assume the form of a scaly patch, a dry or moist papule, a superficial erosion, or a circumscribed ulcer with perpendicular edge. Induration of the base is a characteristic of all forms of initial lesion; it is sharply defined and imparts to the fingers a distinct resistance that may be as firm as

[1] Arch. f. Dermat. u. Syph., 1889, xxi., 59.

cartilage. Commonly it is parchment-like. To detect it, the lesion must be gently pinched between the thumb and finger. It is present coincidently with the appearance of the initial lesion or within a few days afterward. It remains for a long time after the disappearance of the lesion—for two or three months or longer. The secretion from the initial lesion, when present, is thin and chiefly serous. The duration of the lesion is variable; it may disappear before the outbreak of cutaneous symptoms, but very often remains for some time after this event. Unless there has been ulceration, no cicatrix will be left. It may leave a staining of the skin or an induration. It is usually a solitary lesion, though it may be multiple. Enlargement of the nearest lymphatic glands accompanies the initial lesion. If on the external genitals, it will be those of one or both groins. They become hard, and are painless and freely movable. Suppuration is rare, and probably the result of mixed infection. A pleiad of glands, three arranged in a triangle, is quite characteristic of syphilitic infection. In women initial lesions are often so small and last so short a time that they are not noticed. In them induration is often not noticeable, and the diagnosis is much more difficult than in men. They are found on the external genitals, within the vagina, and on the cervix uteri.

The initial lesion may at first assume the character of the soft sore. This is the result of mixed infection with both the virus of syphilis and of the local venereal ulcer. The ulcer will after a while become indurated and assume its proper characteristics. It is in these cases that a suppurating adenitis may develop. Modifications from location of the initial lesion must also be noted. 1. *Of the urethra.* A chancre may be at the meatus, in the fossa navicularis, or deeper parts. At the meatus it attracts attention by causing a slight impediment to urination. The lips are found glued together by a scanty, viscid secretion. The normal opening of the urethra becomes lessened by the induration, which usually involves the entire circumference of the meatus. If located deeper down, it may give rise not only to interference with urination, but also to some pain, and later to a muco-purulent or purulent discharge

like that of gonorrhœa, because it causes a urethritis. It may be felt as a hard, tender, circumscribed nodule, and be seen, with the endoscope, as a grayish-red erosion of the urethral wall. It may give rise to symptoms of stricture. 2. *Of the anus.* A chancre may be without the anus, at its margin, or within the anal ring, and usually presents a thickened, fissured, ulcerated surface. It is of a pale-rose tint, and decidedly indurated. 3. *Of the fingers.*[1] An initial lesion may be seated at any part of the phalanges, but most often at the sides or base of the nail, or at its free margin. It begins as a papule, pustule, excoriation, or fissure, and attracts attention as an obstinate hang-nail or fissure; or as an irregular, deep-red, somewhat elevated mass that is ulcerated and covered with a scanty serous secretion. The finger is apt to be swollen at its end. The epitrochlear and axillary ganglia are enlarged, and there may be moderate lymphangitis. 4. *Of the lips.* This chancre is usually covered with a greenish-brown crust, which, when removed, leaves either an erosion of little, if any, hardness, or an ulceration of cartilaginous consistence. It may begin as a fissure or painful excoriation. The lips may be greatly swollen. Either the upper or lower one may be affected; usually only one. The submaxillary glands on the side of the lesion are commonly first affected. 5. *Of the tongue.* Here we meet with a hard, circumscribed, flat, slightly elevated, dull-red, smooth, pea-sized nodule; or a round, sharply defined, fleshy red, raised, hard ulcer. The cervical and submaxillary glands are enlarged. 6. *Of the throat.* The patient first notices difficulty or pain in swallowing, the latter in the region of the tonsils. Then the submaxillary and cervical glands become swollen. Examination shows an intense, limited or diffused, general or unilateral, brown or dark redness of the pharynx. The tonsils are enlarged, hard, and red, and may be eroded, and perhaps covered with an ash-colored deposit—a false membrane. Or we may find an irregular, hard ulcer with gnawed-out edges, and, it may be, crater-shaped floor covered with dirty-brown or grayish

[1] An admirable study of these lesions by Dr. R. W. Taylor will be found in the Medical Record, 1891, xxxix., 69.

deposit. One or both tonsils may be affected. 7. *Of the nipple.* Chancres of the nipple are usually multiple, and may take the form of an erosion, a scaly patch, or an indurated fissure. The size varies from that of a lentil up even to three inches in diameter. They are sometimes linear, sometimes sickle-shaped along one side of the nipple, and sometimes completely encircle the nipple. The nipple is red or dark red, enlarged, hardened, and at times flattened. Mastitis may complicate matters. The axillary glands are enlarged, as are often those along the upper edge of the pectoralis major. On healing, the initial lesion leaves a flattening of the nipple, and perhaps a leaning of it to one side, characteristics that should put us on our guard in the examination of wet-nurses.

About six weeks after the appearance of the initial lesion (it may be as early as the twenty-fifth day, or as late as the one hundred and sixtieth), we have *the stage of eruption* of the so-called secondary syphilides. Usually just before the outbreak of the eruption, or shortly after it, examination will show a general enlargement of the lymphatic glands, especially the epitrochlear and post-cervical. At the time of the eruption, or shortly before, the patient may experience certain constitutional disturbances, such as severe headache, malaise, pains in the joints, and a rise of temperature of moderate extent. In very many cases these disturbances either do not exist, or are of so slight severity as not to attract the patient's notice. In some cases a more or less profound anæmia will manifest itself, or the patient will fall into a markedly cachectic condition. Either of these may last far into the secondary period of the disease. Weakly individuals are more prone to these severe constitutional derangements than are the robust, and Fournier teaches that they are most apt to appear in women.

The eruptions of syphilis are, for convenience, divided into two groups named, respectively, secondary syphilides and tertiary syphilides; or the early and late lesions. No hard-and-fast lines can be drawn, as sometimes those lesions usually seen late in the disease manifest themselves early in its course. The secondary syphilides are those

that develop during the first two years after infection. They are marked by a more or less general and symmetrical dissemination over the whole cutaneous surface; by polymorphism; by running a rather definite course; by implicating the more superficial parts of the skin and mucous membranes; and by leaving little, if any, trace of themselves. In these respects they differ from the lesions of late syphilis, which are grouped and limited to certain regions, are not polymorphic, show less tendency to run a definite course, involve the deeper structures, and are prone to leave permanent scars.

The **eruptions of secondary syphilis** are the erythematous, the papular, and the pustular syphilide. The first eruption of the secondary stage is usually an erythematous one, the *macular syphilide*, or the syphilitic roseola. Unlike other syphilides, which are all largely composed of new cell-growth, this may be a hyperæmia without cell-infiltration. It may be a general eruption, though usually most marked upon the trunk and flexor aspect of the limbs. The macules are about the side of a ten-cent piece, or smaller, of a faint rose-red color, circular in form, and little if at all raised above the skin. At times we meet with annular lesions from disappearance of the center of the macule. The lesions, excepting in relapsing eruptions, are distinct from each other. They become more evident on exposure to cold, it being no uncommon thing to see them appear upon the patient's body while he is before us stripped for examination. After being out for a time their color becomes purplish red, changing to a tawny or yellowish red, and later to a brownish yellow. In their early stage they can be made to disappear on pressure. They either disappear and leave either no trace or some pigmentation, or they develop into papules. They often coexist with papules and pustules. The evolution of this eruption usually requires a week or ten days; sometimes it may be much less. The duration of the eruption is from one to three months if not removed by treatment. Relapses occasionally occur, and these may be met with as late as the end of the first year. Then it is usually limited to certain regions. It gives rise to no incon-

venience, and is often overlooked by the patient except when it appears on the face or hands. At this time there are apt to be an erythematous condition of the pharynx, some sore-throat, a rheumatoid affection of the joints, falling of the hair, and, perhaps, an iritis, and mucous patches in the mouth, upon the vulva, in the groin, upon the scrotum and under surface of the penis, and about the anus.

While the *diagnosis* is easy, if we have seen the patient from the time of the initial lesion, in some cases we must differentiate between it and mottling of the skin; an exanthem; a medicinal eruption; chromophytosis; and, if we have annular macules, trichophytosis corporis. From *mottling* of the skin it is diagnosed by the fact that in syphilis we have macules of a reddish tint interspersed with skin of normal hue, while in mottling we have light macules with dull purplish-red interspaces. From an *exanthematous fever* it is diagnosed by the absence of catarrhal or gastric symptoms and marked pyrexia, and by the sluggish character of its lesions. From a *medicinal eruption* it is diagnosed by an absence of gastric disturbance, and by its lesions lacking the urticarial or œdematous character. From *chromophytosis* it differs in having a red rather than a café-au-lait color, by not being scaly nor capable of removal by scraping, by its more extensive distribution, and by the absence of the microsporon furfur from the scales when they are examined under the microscope. From *trichophytosis* it differs in the greater extent of its distribution, and in the absence of the trichophyton fungus from scales scraped from the skin. From *pityriasis rosea* the differentiation is sometimes difficult when the syphilitic macules have assumed a ring-form. As a rule, there is no difficulty, as a pityriasis rosea will be scaly, and will present not only rings, but macules of all sizes, while the syphilitic macules are not scaly and are of more uniform size.

The *papular syphilide*, while usually following the erythematous syphilide, may be the first eruption of the disease. Indeed, a great many cases begin as a maculopapular eruption. The papules may develop from macules

or may appear as papules. Very commonly both macules and papules will be present at the same time. If it follows the macular form, it is apt to appear while the latter is fading. The eruption consists of a greater or less number of firm, rounded, fleshy-red elevations of the skin, varying in size from that of a pinhead to one inch in diameter. After continuing unchanged for a certain time they undergo absorption; the oldest or central part of the papule disappears first, sinks in a little, and becomes scaly. It is then that slight pruritus may be complained of. They are scattered over the whole cutaneous surface, and often appear in well-marked groups. They are prone to relapses, and sometimes are seen as a relapsing eruption in the tertiary stage of the disease, when they do not occur as a general eruption, but in groups upon one or more regions of the body. According to their size, they have received the names of the lenticular and miliary papular syphilide, the former being the larger and most common eruption.

The *lenticular papular syphilide* is a hemispherical or flattened, firm, fleshy, lentil- to split-pea-sized prominence with a smooth and glossy surface. Not infrequently the superficial layer of epidermis over it is wanting from the central portion and slightly detached around the base, forming a fringe called the collarette of Biett. This is regarded as a diagnostic symptom. The color of the papule is at first light red; later it assumes a rawham color that is best seen on the legs. From the knee down it may have a purplish or hemorrhagic appearance. Such papules are usually present in great number and scattered over the whole body. On the face they are apt to locate along the hair-line on the forehead, forming the corona veneris. On the scalp they are not very numerous, and are apt to become papulo-pustules and crust; or they itch slightly and are scratched. The palms and soles are usually well covered in any general outbreak of them. Here they appear as reddish spots under the thick epidermis. Desquamation is often seen over the papules on the palms and soles. Sometimes the eruption is very slight in extent, only a few scattered papules being

found. This syphilide develops slowly, runs a course of one or two months, and disappears, leaving pigmentation or slightly depressed spots, neither of which is permanent. In undergoing resolution the papules may become scaly and form a papulo-squamous syphilide, or pustules may form on them during their course, and we then have the papulo-pustular syphilide.

FIG. 67.

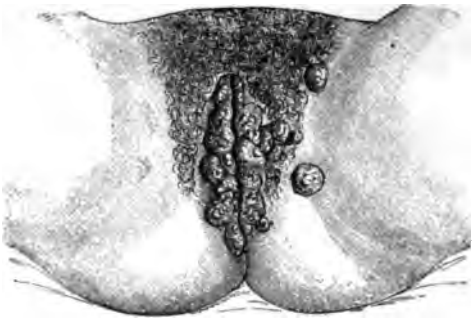
Scaling papular syphilide. (After LASSAR.)

While the form of the lenticular syphilide just described is the typical one, we see at times larger papules, from three-eighths to half an inch in diameter, forming the *large, flat papular syphilide.* This rarely, if ever, is a general eruption, but is limited to certain regions. It may occur alone or with the lenticular syphilide. It usually follows the latter or appears when it is fading. It frequently comes as a relapsing syphilide, and often appears late in the second year. It has a flattened surface and a circular

outline. The lesions often coalesce and form patches which frequently become scaly and resemble psoriasis. The scaling is never very great; the scales are thin and adherent, and do not cover the whole patch. They frequently occur upon the flexor aspect of the extremities and in the bends of the joints. Instead of forming patches by coalescence, the individual papule may enlarge at the circumference and become depressed at the center and form circinate lesions, whose surface may become moist.

The *moist papule* or *mucous patch* is a modified form of the lenticular papule, and is simply a papule subject to

FIG. 68.



Condylomata lata. (After TAYLOR.)

heat and moisture. It is found where two folds of skin rub together, as in the peno-scrotal fold, between the scrotum and inside of the thigh, around the anus and vulva, and upon mucous membranes. It is of circular shape and has a flattened surface which is sometimes depressed in the center. Newly formed ones have a bright-red or raw appearance, but they soon become covered with a dirty whitish coating made up of thickened and softened epidermis. About the anus and vulva they form large flattened tubercles called *condylomata lata.* (Fig. 68.) They give forth a most offensive odor when not kept clean. When in the mouth they form "opaline patches,"

looking as if the mucous membrane had been pencilled with nitrate of silver. They are usually not elevated. If at the angle of the mouth, they are generally fissured. The mucous patch is one of the most contagious of syphilitic lesions, the evidence of infection being an initial lesion of syphilis, and not a mucous patch. It is also at times, especially when it comes late in the disease, most obstinate to treatment, and inclined to relapse.

The *miliary papular syphilide* is much rarer than the other form of papular syphilide; in fact, it is one of the least common of the syphilides. The eruption consists of numerous pinhead- or slightly larger sized conical papules of a purplish-red hue, either disseminated over the whole body or aggregated in groups forming circles or segments of circles. They are developed about the hair follicles and have depressed centers. Many of them may be surmounted by a small vesicle or vesico-pustule. This constitutes what has been named the *vesicular syphilide*. Sometimes the lesions when closely pressed into patches may be scaly. It may be an early lesion or a relapsing later one. In the latter case the eruption is not abundant, but in groups. The color is brownish red, and pigmentation and permanent pitting are left by the lesions, if they have lasted any time. They rarely change into condylomata. Their evolution is rapid, being fully developed within two weeks. Pea-sized conical papules sometimes are seen among the miliary ones.

The *diagnosis* of the papular forms of syphilis is generally easy because other symptoms of the disease will be sure to be present and to establish the diagnosis. It is possible that error may arise in distinguishing the patches of scaling papules from *psoriasis*, but here the location of the patches upon the flexor surfaces of the extremities, and over the bends of the elbows; the scaling not being commensurate with the patch, but having a red, sharply defined border about it; and the well-marked infiltration of the patches, are all features that would throw out the diagnosis of psoriasis. The miliary papular syphilide may be confounded with *lichen planus* or *keratosis pilaris*, but the absence of itching is always in favor of a syphilide;

and the conical or rounded shape of its papules is in strong contrast with the flat, angular, and umbilicated papule of lichen planus. The syphilide is also a much more widely disseminated eruption than is lichen planus or keratosis pilaris likely to be, and is never seen confined to the anterior face of the wrists as is lichen planus.

The *pustular syphilide* is the last eruption belonging to the secondary stage that remains to be described. It is always evidence of a poor condition of the health of the patient who bears it. It may be the first eruption of syphilis, or follow the erythematous or papular form, or occur later. It may develop from a macular or papular syphilide, or occur with either of them. It may occur as a relapsing eruption late in the tertiary period. It is held by some authorities that it is always the product of infection of a syphilide by pus-organisms. The appearance of this form of syphilide is not infrequently accompanied by fever. It may assume varying forms and sizes, to which in the faulty nomenclature of the older writers have been given the names of non-specific lesions, greatly to the confusion of the student. Dr. George H. Fox has done well in discarding all such terms, and in describing two forms, the lenticular and the miliary pustular syphilide.

The *lenticular pustular syphilide* (variola-form) occurs as a disseminated eruption of small, hemispherical, pea-sized pustules, having a hard, papular base and more or less of an inflamed areola. It may develop by the softening of a papule or be a papulo-pustule from the start. In the latter case its outbreak will be marked by fever, which is apt to recur with each succeeding outbreak. The eruption may be general or upon certain regions. The lesions are discrete, and do not form marked groups, although in the pustular eruptions, as in others, it is easy for one who looks for them to find groupings in circles and segments of circles. A few days after they appear they begin to desiccate, and the larger ones may umbilicate. At this stage they become crusted with a dirty-yellow, brownish, or greenish-brown crust. This falls soon and leaves a transient pitting and pigmentation. Relapses may occur.

The *miliary pustular syphilide* (acne-form). This eruption consists of millet-seed- to pinhead-sized acuminate pustules developing generally from papules and occurring in small groups of about the size of a quarter- or half-dollar. It may occur as a general eruption, but is apt to be more marked and lasting on the extremities than on the trunk. The lesions, especially when occurring upon the flexor aspect of the joints, are liable to coalesce. They are developed in and around the hair follicles, and may be perforated by hairs. They are topped with small crusts. The eruption lasts two or three months by the outbreak of new lesions, unless controlled by treatment. It leaves pigmentation and pitting that may remain for several months.

While these are the two chief varieties of the early pustular syphilide, there is another variety that is called the *impetigo-form syphilide*, which occurs most commonly in the middle or latter part of the first year of syphilis. It may occur as late as in the third year. In it the pustules are small and flat, and by confluence an impetiginous crust is produced. They may form patches with crusting only at the border. This form is met with usually on the face, arms, and thighs. A few superficial ecthymatous lesions may develop, but ecthymatous lesions are usually late manifestations.

The *diagnosis* of the pustular syphilide is usually easy from the presence of other symptoms of the disease. The lenticular form may be mistaken for *variola* or *varioloid*. It differs from these in the infiltrated bases of the pustules, in being composed of lesions of varying size and age, in not occurring in the mouth, and in not running a definite rapid course. The miliary form might be mistaken for *acne*, but it is never confined to the face, chest, and back as is acne, nor does it present comedones, and so great multiformity of lesions.

Tertiary Syphilides. The erythematous, papular, and pustular syphilides are those eruptions that occur in the early months of syphilis and during the first year. As we have seen, they may also constitute relapsing eruptions later in the disease. Modifications of them may occur late in the secondary period or even in the tertiary period.

Besides these, we have a second group of syphilides that occur any time after the first year, and sometimes as late as twenty or more years after the initial lesion, when the patient may have lost all remembrance of it. To these eruptions the name of tertiary or late syphilides is given. Their peculiarities have been indicated in a general way

FIG. 69.

Annular tubercular syphilide. (After TAYLOR.)

when writing of the early syphilides. They are the tubercular, the squamous, the pustulo-crustaceous, the gummatous, and the ulcerative syphilides. Exceptionally these eruptions may occur before the second year, when they are to be regarded as precocious lesions.

The *tubercular syphilide* occurs in the latter part of the

second year of syphilis, or later. Exceptionally it may occur during the first year as a so-called precocious syphilide. As a rule, the early syphilides cease appearing after six or seven months, and then after a varying interval of rest the late lesions appear. These may never come at all, usually as the result of judicious treatment, or it may be because of the vigorous resistance of the constitution of the individual. Tubercular lesions occur in the form of clustered nodules in the deeper part of the corium. At first they are of faint-red color; gradually they become a dull red, and later still darker. In size they vary from that of a split pea to that of a hazelnut, and constitute firm, elastic, fleshy protuberances. They are round, smooth, and somewhat glossy, or flat, rugous, and withered. They are frequently scaly. Most often they are arranged in circles or segments of circles; or they may be in the form of rings from the first, or in consequence of the disappearance of the central members of the group. (Fig. 69.) There may be but a single group; or numerous groups may be scattered over the body in a symmetrical manner. A very frequent location for them is the posterior portion of the neck or on the face. The later in the course of the disease they occur, the more they are apt to form but a single group. If uninfluenced by treatment, tubercles may continue to form for years, the old ones disappearing and new ones coming. They disappear either by absorption, or by softening or breaking down and forming a sharply cut ulcer with perpendicular edges and yellow sloughing base. A number of the lesions breaking down at once and coalescing, a large ulcer with scalloped border, indicating its composition from single lesions, and with more or less thick greenish crust, will form. In either case they leave depressed, smooth cicatrices, at first pigmented, but later white. They give rise to no subjective disturbances. Rarely do they form a general eruption.

The *diagnosis* of this form of syphilide is usually readily arrived at by finding other symptoms of syphilis. Occasionally it may be confounded with lupus vulgaris and leprosy. From *lupus* it is differentiated by the compara-

tive rapidity of its course, lupus being a disease of exceeding slowness of development; by its occurrence in mature years, lupus being a disease of youth; by its sharp-cut round ulcers; by its thick greenish crusts, and by the smoothness of its cicatrices, those of lupus being puckered and deforming. Syphilis at times bears a striking resemblance to *leprosy* when its tubercles are located in the eyebrows, face, and ears, but the absence of anæsthesia is a

FIG. 70.

Squamous serpiginous syphilide. (After LASSAR.)

positive diagnostic sign against leprosy. Moreover, other symptoms of leprosy, such as swelling of the ulnar nerves and peculiar brown patches, will be absent.

The *squamous syphilide* is not usually described, as it is a modified form of either the papular or the tubercular lesion. In using the term here, I follow Dr. George H. Fox, and like him adopt it purely on clinical grounds. He applies the term to scaly patches of circular or irregular form that occur after the first year of syphilis. These

patches are covered with thin horny scales seated upon an infiltrated base. We may have one of two forms: the discoid or the circinate. The *discoid form* is almost peculiar to the palms and soles and neighboring parts, and constitutes the only apparent lesion. The round patch of varying size, but with a sharply defined reddish seam beyond the scaling, and an infiltrated base, tends to become serpiginous, creeping over a considerable portion of the skin. Sometimes while it advances at one border it heals at the other; at other times it clears up in the center, leaving an elevated, scaling marginal ring. The ring may be broken and leave a curved line, and if two or more of these lines meet, we have a gyrate figure. Usually but one palm or sole is involved. The skin is apt to crack in the natural creases, and then the patient will suffer some pain and discomfort. It is always an obstinate lesion to cure, persisting sometimes for months or years. The *circinate form* differs from the just-described one in being annular from the first, and in occurring not only on the palms and soles, but elsewhere on the body.

The *diagnosis* of this form of syphilide from a squamous *eczema* of the palm is often one of great difficulty. The fact that only one palm is affected is always suggestive of syphilis. Moreover, in syphilis there are more infiltration and much less itching. Indeed, the latter may be entirely absent. In syphilis the lesion is often crescentic, with sound skin between the horns of the crescent. This is never seen in eczema. *Psoriasis* of the palm is in most cases not to be thought of as a stumbling-block in diagnosis, as it is exceedingly rare for psoriasis to affect the palms, and then only as a part of a general outbreak of the disease. Some writers use the term syphilitic psoriasis for the scaly palmar syphilide, but it is a most faulty method of nomenclature.

The *pustulo-crustaceous syphilide* is characterized by large and usually deep-seated pustules or ulcers, covered by prominent and peculiar crusts. It is the ecthyma-form of R. W. Taylor and other authorities. It occurs as a late and localized form of the disease; never as a general erup-

tion. It may occur as a precocious syphilide. It is seen in debilitated subjects, and is of gradual development, without febrile symptoms as in the pustular syphilide. It has preference for the scalp, face, and extremities. It assumes three forms, the ecthymatous, rupial, and pemphigoid.

The *echthymatous form* begins as an eruption of one or more round, flat pustules of a diameter of one-quarter to one-half inch. They may become as large as a silver half-dollar. They have a well-marked inflammatory areola and a swollen and indurated base. The pus soon dries and forms a flat, greenish or brownish-black crust, whose center is sometimes depressed. At first the crust fully covers the pustule, but later, either through drying or on account of an increase in the size of the pustule, a raw rim is left around it. When it is now removed it exposes a typical punched-out ulcer with its base covered with sanious pus, which rapidly dries into a new crust. Under proper treatment the pustule heals, and when the crust falls there will be left a healed or nearly healed ulcer. A permanent cicatrix is left when healing is completed, which is smooth and white eventually. This syphilide is seen most often on the legs and arms. If the course of the disease is not checked, the crust is cast off by increased suppuration, and the ulcerative syphilide is before us.

The second variety of the pustulo-crustaceous syphilide is that which is commonly known as *rupia*. It differs from the preceding variety in being more superficial at the beginning, and in forming a conical, laminated crust somewhat resembling an oyster shell. It begins either as a superficial pustule or as a small flattened bulla with no inflammatory induration. Upon the primary lesion a greenish crust develops, under which ulceration, with suppuration, occurs. The margin of the ulceration extends a little beyond the original crust. A new crust forms upon it, raising up the original one, and this process being repeated, at last a laminated crust is raised. When the ulceration extends more rapidly in one direction than another it follows that the crust will be higher at one end than at the other. Crusts may form a half-inch or more in height, and one or two inches in diameter. If

the lesions are numerous, they are usually small; if few, large. When these thick conical crusts are removed, the ulcer is exposed and is less deep than in the ecthymatous form. On healing, a permanent, smooth, white cicatrix is left at last.

The third variety of the pustulo-crustaceous syphilide is the *pemphigoid* or *bullous* form. It is a very rare lesion in acquired syphilis, though quite common in hereditary disease. It consists in an eruption of superficial, purulent, flattened bullæ from one to five centimeters in diameter, which tend to dry into thick crusts. They are surrounded by a dull-red areola, and are soon covered by dark greenish-black adherent crusts. If the patient be in fair health, the ulceration under the crusts will not be deep. If the patient be a broken-down subject, the ulceration may be very deep. It will leave either a pigmented atrophic spot or a pronounced scar, according to the depth of the ulceration.

The *diagnosis* of the pustulo-crustaceous syphilide is usually easy if the disease is known to the observer, as no non-specific disease resembles it closely. The so-called *ecthyma cachecticum* is more inflammatory than is the ecthymatous syphilide, and more superficial. The bullous syphilide often bears a striking resemblance to *pemphigus*, and can be diagnosed only by a study of all the features of the case.

The *gummous syphilide* is perhaps one of the most characteristic of the late lesions of syphilis. It consists in a deposit of gummy material in the skin. The distinction between some tubercular lesions and a gumma is often very indistinct, and made principally by the size. The gumma begins in the subcutaneous tissue and involves the skin secondarily. It may take the form of a single tumor, a group of nodules, or a diffused infiltrated patch. It is nearly always a late lesion, and while it may undergo absorption it possesses a strong tendency to break down and ulcerate. (Fig. 71.)

The single tumor begins as a small pea-sized nodule, seated in the subcutaneous tissues so deeply as to be ap-

preciated only by the touch. It grows slowly; in the course of weeks or months it may attain the size of a nut and push up the skin over it into an evident tumor, which is movable, firm, elastic, painless, and rolls under the finger. Increasing in size, it involves the skin, which then becomes of a dull-reddish color. When the skin becomes involved the tumor is no longer movable, and soon fluctuation may be felt that would lead the inexperienced to open it as an abscess. If he did so, it would

FIG. 71.

Gummata. (After JULLIEN.)

be a mistake. He would find only a little pus, a gummy substance, and some blood. Left to itself, the tumor may be absorbed, or it may break down and ulcerate, leaving a characteristic deep and round ulcer. The scalp and forehead are the chosen sites for this syphilide, though it may occur anywhere. It sometimes attains a large size —as large as a hen's egg. When this lesion occurs as a precocious syphilide it is usually of small size and multiple.

When gummata occur in the form of grouped nodules the skin between them is apt to become infiltrated with a gummatous deposit, and the patch will present the dull brownish-red color of the late syphilides. The individual members of the group run a course similar to that of the isolated gumma, but do not attain its size. When they break down they form a large irregular ulcer. This variety of the gumma is frequently met with upon the scalp, the nose, the outer aspects of the extremities about the joints, and around the lower portion of the leg and ankle. Diffuse gummatous infiltration of the skin probably precedes all serpiginous ulcerations. Apart from this it is rarely seen, and almost always ends in ulceration.

Other gummatous deposits are known as syphilitic dactylitis, admirably described by R. W. Taylor, and syphilitic bursitis, carefully studied by E. L. Keyes. One being a bony and the other a synovial disease, they do not here concern us.

The *diagnosis* of the gumma must be made with care. It may simulate other forms of tumors. It is not as hard as the *sarcoma*, nor as compressible as the *lipoma*, and it invades the skin. An *abscess* is usually attended by pain and signs of inflammation, and runs a more acute course than does the gumma.

The *ulcerative syphilide*, according to Dr. George H. Fox, merits being described by itself, though in itself only a sequence of a tubercular, pustulo-crustaceous, or gummatous syphilide, because in the majority of cases of syphilitic ulcers met with it is hard or impossible for us to say what the preceding lesion has been. For convenience, he describes the superficial, the serpiginous, and the deep or perforating forms of syphilitic ulceration.

The *superficial syphilitic ulcer* is circular, with sharply cut edges and dirty-yellowish purulent base. It most often follows a pustular or pustulo-crustaceous lesion, and may appear comparatively early in the disease, especially in debilitated subjects. It is usually of the size of a quarter- or half-dollar, and frequently coalesces with other ulcers to form ulcerative patches with scalloped margins. The face and legs are its most common sites.

The *serpiginous ulcer* is so called because it tends to creep over the surface, healing by a cicatrix as it passes along. It may develop from a single circular ulcer healing in the middle and at one side, and leaving a crescentic or "horseshoe" ulcer at the other side, with a sharp convex margin, beyond which is a narrow zone of infiltration upon which the ulceration constantly encroaches, while healing at its concave border. Or a group of crusted pustules or softening tubercles form a number of small round ulcers, of which the outer ones usually form a curving line. While those in the center and at one side tend to heal, new lesions develop at the periphery of the opposite side, which ulcerate and perhaps coalesce, and so the disease creeps on. This form is often observed upon the back and on the extremities; it is not particularly painful, and the patient's health may not be impaired.

The *deep ulcerations* of syphilis result, for the most part, from the breaking down of gummatous deposits. The small ones are crater-like in shape. Often the opening of the softened tumor is smaller than the softened mass, and it is not infrequent to find the cavities of adjacent tumors running together subcutaneously.

Ulcerative syphilides sometimes are covered with exuberant granulations.

The *diagnosis* of syphilitic ulcers from non-specific ulcers is most important from a therapeutical standpoint. A chronic ulcer located anywhere above the middle half of the leg is in most cases syphilitic. If it is not, it is probably either traumatic, tubercular, or cancerous. The *traumatic ulcer* is acute and highly inflammatory; of irregular shape; has a history of traumatism; and heals rapidly, excepting in very broken-down subjects, under simple dressings. The *tubercular ulcer*, if from broken-down caseous glands, has a history of the previous glandular affection; is irregular in shape; often presents a number of sinuses and ridges of inflamed tissues; and runs a sluggish course. If it is a *lupous ulcer*, there will be found somewhere in the neighborhood the characteristic apple-jelly-like tubercles; there will be a history of com-

mencing in early life; the edges of the ulcer will be shelving or undermined; and there will usually be more or less deforming cicatrices present. A *cancerous ulcer*, usually an epithelioma, will have a history of beginning in a pimple, wart, mole, or such like; will be irregular in shape with an uneven floor; will be apt to be attended by lancinating pain; will usually be a single lesion, located on the face; and will have a raised, waxy, rolled-out border over which delicate blood vessels will be seen to course.

The diagnosis of ulcers of the leg lies between one of syphilis and of *varicose dermatitis*. If the ulcer is irregular in shape with shelving edges, rather superficial, surrounded by a brawny, infiltrated, brownish or dark-red tissue with more or less scaling, and there are varicose veins above it, we have to do with the so-called varicose ulcer. This is in sharp contrast with the round or scalloped bordered, deep, punched-out ulcer with perpendicular edges and greenish base, around which there is but a small zone of redness. The diagnosis of syphilis is strengthened when we find a number of ulcers, or the cicatrices of old ulcers. As a rule the syphilitic ulcer is located on the posterior surface of the upper half of the leg, while the varicose ulcer is on the anterior surface of the lower third of the leg. The diagnosis from a *traumatic* ulcer has already been given.

Over the *pigmentary syphilide* there has been no little discussion. By this term is not meant pigmentation following a syphilide, which is sufficiently common, and due to a staining of the skin with hæmatin, but a true pigmentation without antecedent lesion, which is sometimes seen on the sides of the neck, especially in women. It is composed of irregularly round or oval spots, one-eighth of an inch to one inch in diameter, with ill-defined margins, and café-au-lait color, which does not fade on pressure. The color may be very faint. The lesions may be discrete or confluent. When they are very numerous they have been compared by Fournier to a "network of lace with large meshes." This is one of the rarer manifestations of syphilis.

General Diagnosis of Syphilis. Having now studied briefly the various cutaneous lesions of syphilis, we are prepared to state those general features of the syphilides that serve to distinguish them from other diseases of the skin.

One marked feature of them is that *they do not itch.* Itching does occasionally occur with the scaling papular syphilide, and in some cases the patient will complain of an itching of the skin that is quite independent of syphilis, but in themselves they do not itch.

The early eruptions of syphilis are general and exhibit a marked *polymorphism*, many different lesions being often present at the same time; as, for instance, macules, papules, and pustules. The late eruptions exhibit a strong tendency to *grouping* of the lesions in circles and segments of circles.

The *color* of the lesions is peculiar, and perhaps may be best described as that of raw ham, though the classic term is "copper." This color is by no means always present. It is not seen in the early bloom of the early lesions, but is pretty sure to be found in those that have existed for some time, and in the late lesions. The color of a lesion on the legs, it must be remembered, must not be regarded for purposes of diagnosis; it is upon the arms, face, trunk, and thighs that we must look.

Painlessness is often a suggestive symptom pointing toward syphilis when we have to decide as to the nature of an ulceration.

It is well not to lay too much stress upon the history of the case in making up our mind as to a late syphilide, because with the best intentions the patient may forget having had an insignificant initial lesion some twenty, or perhaps thirty, years before.

Space will not permit of our here detailing the differential diagnosis between syphilis and the many diseases which it may simulate from time to time. For this the reader must be referred to the sections upon eczema, psoriasis, lupus, alopecia, etc.

Etiology. That acquired syphilis is due to contagion we know. Further than this we know little of certainty.

Various attempts have been made to prove its bacillary origin, by Lustgarten and others, but at present the best authorities are by no means agreed upon the correctness of this theory.[1] We can, in the meantime, speak of its being due to a specific virus. The microbian theory is also applied to all pustular syphilides, and we are taught that they are the result of an infection of the specific lesion by the pus-coccus.

PATHOLOGY. Syphilis is a new cell infiltration which always breaks down. The macular syphilide is the only one that does not show this infiltration until perhaps late in its course.

Hereditary Syphilis. Before entering upon the study of the treatment of syphilis, we must stop a while to consider hereditary syphilis. This differs from the acquired form in having no initial lesion, the disease being acquired *in utero* from either one or both parents. We cannot enter upon a discussion of the many conflicting theories as to whether or not the child is diseased on account of springing from a diseased ovum, or spermatozoa; or the possibility of the disease, acquired by the mother after her pregnancy, reaching the fœtus through the placental circulation; or like interesting questions over which the battle rages. For us now it suffices to make the bald statement that the disease may be acquired from one or both parents. It is most sure to be acquired from the mother, and it may be inherited by the fœtus from a mother infected some months after conception. It is possible for a woman to show no signs herself of syphilis, and yet to give birth to a syphilitic child. It is exceedingly rare for the apparently healthy mother of a child hereditarily syphilitic to be infected by it. As a result of syphilitic infection *in utero*, the child may be born prematurely, and dead; it may be born at term, dead, and showing specific lesions; or it may be born alive with some syphilitic eruption; or, as is commonly the case, the eruption may not appear before the second or third week. Miller,[2] from a study of

[1] For a good study of the probable origin of syphilis consult Finger, Arch. f. Dermat. u. Syph., 1890, p. 331.

[2] Jahrb. der Kinderheilkunde, 1888, xxvii., Heft 4.

one thousand cases of congenital syphilis in a foundling hospital in Moscow, found that the first appearance of the disease was in the first month of life in sixty-four per cent. of the cases; and in the second month in twenty-two per cent. In congenital syphilis there is a marked absence of that sequence of events more or less observed in acquired syphilis, but the diagnosis is usually quite as easy. The earliest eruption to appear, as to point of time, is, according to Miller, the bullous syphilide, which he met with in twenty-five per cent. of the cases. One of the earliest and most characteristic symptom of hereditary syphilis is "snuffles," due to an ozæna, which gives the child great discomfort by interfering with breathing and nursing.

The *erythematous syphilide* is, according to Taylor, the most frequent and earliest eruption; according to Miller, it occurs in but forty-five per cent. of the cases. It begins on the lower part of the abdomen as minute round or oval spots, that disappear under pressure at first. It invades the whole body within a week, when the lesions will no longer fade under pressure, but assume the characteristic syphilitic color. One form of the erythematous syphilide in children is seen upon the inside of the thighs, about the anus, and on the buttocks, and may extend down to the feet. It is patchy in character, the patches being either of small size, or large by the coalescence of several smaller ones. It differs from intertrigo in its patchy character, in its darker color, and in its wider distribution.

The *papular syphilide* and its modified forms of the *mucous patch* and *condylomata lata* are common congenital lesions. The lenticular syphilide, large and small, is met with far more frequently than the miliary papular syphilide. It is usually a symmetrical and general eruption. It may be smooth or scaly, and always has the raw-ham color. Mucous patches are very often at the junction of the mucous membrane and the skin, as on the lips or anal orifice. The movements of the parts will give rise to painful fissures—rhagades—which constitute a sign of hereditary syphilis as characteristic as the "snuffles." These rhagades Miller met with in seventy per cent. of his

cases. Mucous patches also occur in the cavity of the mouth. *Condylomata lata* occur where two skin surfaces rub together, and especially where there is more or less moisture, as about the anus and genitals, in the groins and axillæ, and between the fingers and toes. Their color is usually grayish pink to dark brown; their size varies greatly, and their surface is flat, or fissured and ulcerated, and exudes an offensive secretion. They are characteristically located when at the angles of the mouth, in combination with mucous patches in the mouth with rhagades between.

The *pustular syphilide* may be general, but is usually most pronounced on the thighs, buttocks, and face. It shows a tendency to group about the mouth. It is usually indicative of profound syphilization. The pustules may leave scars. Ecthymatous pustules may develop, but usually not till late in the disease.

The *vesicular syphilide* is a rare form of early congenital syphilis of severe type. It is never general, but appears as groups of closely packed together vesicles upon the chin, about the mouth, or on the nates, forearms, hypogastrium, or thighs. They are seated upon infiltrated, brownish-red bases. The larger vesicles may be seated upon papules. This eruption is apt to be associated with a pustular or bullous syphilide.

The *bullous* syphilide, unlike what obtains in adults, is comparatively common in congenital infantile syphilis. Miller found it in twenty-five per cent. of his cases. It frequently exists at birth or as the earliest syphilide, and is indicative of a severe form. It is most commonly seen on the palms and soles, which are often covered with the lesions, while few, if any, are on the trunk. The face is a favorite location for the eruption. The bullæ are either tense or flaccid, and at first have sero-purulent contents that soon become purulent. They are seated upon a raw-ham colored infiltrated base. Hemorrhage into them not infrequently occurs. When they rupture or dry up they exhibit an unhealthy-looking ulceration that soon becomes covered with a greenish crust. Some of them may dry up with little, if any, ulceration. It rarely relapses. It

differs from *pemphigus* in occurring upon the palms and soles, while sparing the trunk, and in the profound cachexia and the presence of other signs of syphilis.

The *tubercular syphilide* is not common, and is always a late lesion. While it may be seen as early as the sixth month, it is more apt to occur much later as a relapsing syphilide. In appearance and course it resembles the same lesion of acquired syphilis.

The *gummatous syphilide* is also a late manifestation of the disease, and is sometimes met with in early adult life as a lesion of congenital syphilis.

Kaposi regards as a special and characteristic symptom of hereditary syphilis a diffused infiltration of the palms and soles, the skin of which is uniformly brownish red, dry, shiny, and fissured.

Besides the skin-lesions the infant bears certain unmistakable signs of syphilis. It has a marked pallor, and, no matter how blooming it may appear at first, it soon loses flesh and assumes "an old man" countenance. It has a characteristic, hoarse, toneless cry, which once heard will be remembered. Its hair is scanty, its nose is apt to be flattened, and altogether it is a most woebegone-looking object. The skin eruptions usually occur within the first six months of life, and if the child can be brought through that period it may suffer no more. Nevertheless, congenital syphilis, like the acquired disease, may be latent for years, to crop out once more. The victims of congenital syphilis sometimes show the notched or peg-shaped teeth regarded by Hutchinson as a certain sign of the disease. (Fig. 72.) This appearance is presented by the second set of teeth only, and is not absolutely diagnostic, as the same has been met with in scrofula. The two middle upper incisors are those which are depended on for diagnosis. "They are small, often converging, sometimes diverging. The cutting-edge of the teeth is sometimes narrowed, rounded off. They are stunted and badly developed, often marked with seams in front, and of a dirty-brownish color, but their chief peculiarity is found in their edges, which, being thin when cut, break off centrally, leaving a broad, shallow, vertical notch on the lower

border of the tooth." (Keyes.) The syphilitic child is subject to diseases of the bones, one of the most characteristic of which is *dactylitis*. Space will not permit of a

FIG. 72.

Hutchinson's teeth.

detailed description of the bone and other lesions apart from those of the skin.

TREATMENT. The treatment of syphilis is by the use of both constitutional and local remedies, and by a constant and long-continued watchfulness on the part of the physician over the patient's hygiene and general well-

FIG. 73.

Dactylitis. (After BERGH.)

being. One chief obstacle to the successful treatment of a case is the patient's lack of faith in his physician. Most patients, just as soon as the eruption for which they sought

advice fades away, will cease coming to the physician, and will pay little heed to his warning, that unless they keep themselves under medical supervision for three or four years they will be liable to serious trouble later on. Nevertheless, our first duty is so to instruct them. Then, before putting the patient upon a regular course of treatment, we should give him careful directions as to his exercise, liberal diet, and bathing, and should stop his alcohol, insist upon his taking plenty of sleep, and giving up the use of tobacco. This last is not only to put him in better condition, but also to prevent mucous patches in the mouth. The patient should be cautioned against drinking out of public drinking-cups, and apprised of the danger of infecting others by means of table utensils, pipes, and the like. Now he is ready for his course of treatment.

Constitutional Treatment. The drugs employed and found of value in syphilis are chiefly but two, namely, mercury and iodine in combination with sodium or potassium. These drugs are given in varying combination, and during varying periods, according to the views of different physicians. Mercury is the remedy relied on most for combating the disease, and should be used under ordinary circumstances by itself alone during the first year or two of the disease. The iodides exercise a marked control over the ulcerative syphilides, and in the late or precocious manifestations of the disease. By some they are given continuously or as the sole remedy in late syphilis, but the best practice is in favor of their administration either with mercury or instead of mercury for a short time. Treatment should be begun as soon as we are sure that the patient has syphilis. As an element of doubt may often enter into our diagnosis of the initial lesion, it is a good general rule not to administer specific treatment until the appearance of some secondary symptom. This plan has the additional advantage of producing a moral effect upon the patient, who, if he sees an eruption upon himself, will be more apt to believe that he has syphilis, and to submit himself to a thorough course of treatment.

We will consider first the treatment of early syphilis and the use of *mercury*. This drug, regarded by the majority of physicians as the sheet-anchor in the treatment of syphilis, is administered, for its constitutional effect, by the mouth, by inunction, by fumigation, and by hypodermic injection.

Of these different methods, the most frequently employed is the first—that is, by the mouth. The salt of mercury that I most frequently use is the protiodide, otherwise called the green iodide. This may be exhibited either in pill, tablet triturate, or granule; and as the tablet triturate is easily obtainable, very reliable, and quite inexpensive, my preference is for that preparation. Keyes prefers the granules of French manufacture, and says that the very objection raised by many authorities to the use of the protiodide, namely, its irritant effect on the intestinal tract, is its shining virtue, because instead of giving warning of intoxication by causing salivation, it does so by causing diarrhœa. The dose to begin with should be from one-sixth to one-fifth of a grain three times a day after meals, and the number of pills increased every third or fourth day until there is a little "colicky diarrhœa." The dosage should be then continued at the same number of pills, until the symptoms are controlled. Then we can reduce it to half the number. It may be necessary to give a little opium at the same time with the mercury, in order to control the diarrhœa if it is deemed advisable to continue at the point of full tolerance, and this not only with the protiodide, but with other salts. Practically the daily dose of the protiodide may be put at four or five of the one-fifth grain tablets, and three or four of the quarter-grain ones, and opium is rarely called for.

Many prefer to use metallic mercury in the form of hydrargyrum cum creta, or calomel in the dose of one or two grains two or three times a day after meals, increased every three or four days sufficiently to influence the eruption. Salivation is, in the general run of cases, to be avoided. Some authorities prefer to combine a tonic with the mercury. Taylor gives the following:

℞ Hydrarg. protiodid., gr. viij–x; 52–65
Ferri et quininæ citrat., ʒiss; 6
Ext. hyoscyami, gr. vj; 39 M.
Ft. pil. No. xxx.

℞ Hydrarg. tannici, gr. xv-xxx; 1–2
Quin. sulphat., ʒj; 4
Ext. hyoscyami, gr. vj; 39 M.
Ft. pil. No. xxx.

In severe cases in which it is necessary to get the patient rapidly under the influence of mercury, calomel in one-tenth grain doses in the form of tablet triturates may be given every hour until the gums become tender. Then the calomel should be stopped and the treatment continued with a small dose of the protiodide.

Besides these preparations of mercury we may use the bichloride in doses of $\frac{1}{32}$ to $\frac{1}{16}$ of a grain in solution. It is usually given in compound syrup of sarsaparilla or some bitter infusion. The most common mode of administering it is in combination with the iodide of potassium, the so-called mixed treatment, the formula for which will be given later when speaking of the treatment of late syphilis. The best opinion is in favor of reserving the use of iodine until the early stage is passed. The tannate of mercury is well spoken of in the dose of half a grain. Space will not allow of mentioning the other salts of mercury that have been recommended.

The proper quantity for administration having been learned by experiment, the drug should be administered continuously for from four to six months.

Where practicable the use of mercury by *inunction* is the speediest and best way of getting the patient under the influence of the drug. It may be used from the first or at any time during the course of the disease. Its great advantages are the promptness with which it acts and the sparing of the stomach and intestinal tract. Its great disadvantages are that it is a dirty method, impracticable with most patients, as it attracts notice from his friends and attendants; and the difficulty encountered in getting the patient to carry out the treatment with thoroughness. It is admirable for hospital treatment. The patient is to

be told to rub into his skin, once a day, a piece of ungt. hydrarg. cinereum, or an ointment made with lanolin as a base, of the size of a hazelnut—from half a drachm to one drachm. He is to divide the mass into two equal parts, and work it in with the heel of his hand for about fifteen minutes while he sits before a fire or in a warm room. Before beginning the inunctions he is to take a warm bath, or to bathe the parts about to be rubbed, so as to open the pores of the skin. The first day he is to rub the ointment into the bends of both elbows; the second day, over the sides of the chest; the third day, over the abdomen; the fourth day, inside of the thighs; and the fifth day, behind the knees—that is, he is to choose the parts least covered with hair; and to change the sites of the inunctions, so as to avoid setting up a mercurial eczema. On the sixth day he is to take another bath, and on the seventh day to resume the inunctions. The treatment is to be pursued until active symptoms of the disease are overcome, when all treatment may be suspended. A thorough course of from eighty to a hundred inunctions is said to be often followed by a permanent cure. If the inunctions are to be made by an attendant, he should wear a stout rubber glove. As a substitute for inunctions, E. Welander[1] proposes spreading about a drachm and a half of mercurial ointment on the inside of a small pillow tick, and having the patient wear this, properly fastened, next the skin over the anterior plane of the body, day and night. This plan of treatment is good only in slight cases.

Fumigation is a method which is not used as much now as formerly. It requires the use of a special apparatus and a great amount of time and trouble. It is said to be a very efficient method, specially useful in bad cases and where prompt results must be attained. From one-half to one drachm of calomel, metallic mercury, or other salt of mercury, is vaporized by means of the special apparatus, the naked patient sitting over it enclosed in a cabinet or blankets, out of which only his head protrudes. Each bath lasts ten minutes, and it is repeated every second day.

[1] Arch. f. Dermat. u. Syph., 1897, xl., 257.

The *hypodermic injection* method of administering mercury, or rather the deep intramuscular method, was first advocated by Scarenzio in 1854, and of late years has been much experimented with. The injections are usually made deep down in the gluteal region, behind and above the great trochanter. They are usually painful; often followed by abscesses; require daily or frequent visits to the physician's office; and do not seem to be followed by sufficiently lasting effects to warrant their frequent employment. They are useful where we wish to have a very prompt effect from the mercury, as in a malignant precocious case of syphilis; or where the stomach must be spared; or where the disease has not yielded to the ordinary plans of treatment. Patients in this country seem to object very strongly to their employment. A great number of salts of mercury and combinations have been introduced, each one of which has been found by its introducer the best and most reliable. An admirable study of them will be found in Hare's *System of Therapeutics*, vol. ii., by Prof. R. W. Taylor. Here we can indicate, and briefly, but a few. Taylor gives one of corrosive sublimate, gr. xl; glycerin, ʒj; distilled water, ʒiij, of which twelve drops are used at each injection. The albuminate of mercury, dose fifteen minims; the formamide (Liebreich), dose one-half to a whole Pravaz syringeful of a one per cent. solution; calomel, one part, to liquid vaseline, twelve parts, dose a half Pravaz syringeful once a week; "gray oil," composed of twenty parts of pure mercury, forty of liquid vaseline, and five of ethereal tincture of benzoin, dose one-third of a syringeful every ninth day;[1] the salicylate, fifteen grains to six ounces of water and many others. A final judgment as to the comparative merits of the many salts cannot yet be given.

Late Syphilis. If a patient who has not been under systematic treatment comes to us with a late syphilide, the so-called mixed treatment will be most appropriate to his case. As usually administered it is made up according to one of the following formulas:

[1] Leloir and Tavernier: Giorn. Ital. d. Mal. Ven. e del Pelle, 1889, xxiv., 247.

℞ Hydrarg. bichlor. vel Hydrarg. biniodidi,	}	gr. j–ij;		06–12
Potass. iodidi,		ʒj–ij;	4–8	
Inf. gentian. co. vel Syr. sarsaparillæ co.,	}	ad ʒiv;	ad 120	M.

Dose: A teaspoonful three times a day after meals.

Or,

℞ Hydrarg. biniodidi,	gr. ss–ij;		03–12
Ammon. iodidi,	ʒss;	2	
Potass. iodidi,	ʒij–ʒj;	8–32	
Syr. aurant. cort.,	ʒjss;	45	
Tr. aurant. cort.,	ʒj;	4	
Aquæ, q. s. ad	ʒiij;	ad 100	M.

Dose: A teaspoonful in water, three times a day. (Keyes.)

If a patient comes to us with a gumma, an ulcerative syphilide, a group of serpiginous tubercular syphilides of the tertiary period; or if any of these or other deep lesions threatening destruction of tissue appear early in a case of precocious or malignant syphilis; or if the disease attacks the nervous system, the larynx, pharynx, or eye—in fact, at any time when there is need of prompt effects, we must administer the iodides. If he has had no mercury for some time, it is best to give it to him now either by the mouth, mixed treatment, or inunctions, while the iodide is administered separately but at the same time. The iodide of potassium is most generally used, and next to it the iodide of sodium. There is no set dose for the iodide. It is best given in a dose of five grains in solution in water, three times a day, before meals, diluted in milk, or Vichy, or soda-water; or some three hours after meals. Delavan[1] has found that the iodide can be given most satisfactorily by putting five drops of a saturated solution in the bottom of a small tumbler, with fifteen drops of essence of pepsin, and pouring upon it two ounces of warm milk. This is be set away in a cool place, and will form a rennet custard, which can be easily swallowed. This is a good method when we wish to give nourishment with the medicine or when the throat is sore. The mixture can be given a pleasant taste by adding a teaspoonful of sherry wine.

The dose of the iodide should be increased by one or

[1] Med. Rec., 1891, xl., 651.

two drops each day—that is, six drops t. i. d.; then seven drops t. i. d., and so on, until the nose runs and the eyes water, or some symptom of iodism develops. The most convenient method of administration is to have a solution made containing one grain of the iodide to each drop of the solution, so that every drop represents a grain. Most patients bear iodine well, but in some even drop doses produce iodism. Iodic acne is very often induced, but should not cause us to stop using the drug. It is advisable to suspend the administration of the iodides from time to time, and to give mercury, which, after all, must be depended on for curing syphilis.

Now and again we will meet with cases that do not improve under either mercury or iodine, but relapse and relapse, or remain stationary. Such cases should be sent out of town, ordered change of air for a time, and put on a purely tonic course of treatment. Very often when the patient returns home he can take his medication easily, and the previously obstinate lesions will yield readily. This is but what we said at first; the patient's general condition must all the time be carefully watched over.

Salivation is an unpleasant accident that may occur under the use of either mercury or iodine. At one time it was quite common—indeed, mercury was purposely pushed so far as "to touch the gums," and, of course, this was often overdone. Its symptoms are tenderness of the teeth, so that pain is felt when the jaws are snapped together; the gums are swollen; there is a metallic taste in the mouth; a fetid odor of the breath; increased flow of saliva by day and night; all the mucous membranes of the mouth are swollen, so much so as to interfere with mastication and deglutition, and in very bad cases there may be ulceration, loosening and fall of the teeth, and caries of the bones.

Prevention is always better than cure, and to this end we should see that our patient's teeth are in good order before beginning treatment, and direct him to wash his mouth frequently with chlorate of potash solution, ten or fifteen grains to the ounce, or one of alum, and to keep his teeth clean. The patient should be seen frequently at

first, so as to stop the mercury before salivation attains any serious degree. Salivation having begun, the mercury must be stopped, and the potash solution in same strength may be continued, and one or two drachms of it swallowed during the day. The compressed tablets are useful. Dilute Labarraque's solution, or solutions of permanganate of potash or other astringent, may be used for a gargle and mouth-wash. A laxative should be administered, the patient kept warm in bed, and, if necessary, an anodyne given.

Duration of mercurial treatment. How long the patient should take mercury is a question, the answer to which is very variously given by different authorities. Keyes puts it at from eighteen months to four years. Taylor says "at least two years to two years and a half, counting from the date of the commencement," but he advocates intermissions of from two to three months, iodide of potassium being given in the meantime. Schwimmer[1] advocates giving mercury for two or three months, and then one of the iodides for two months; after four or five months of treatment making a pause of two or three months, treating any local lesion locally, and then repeating the course. Fournier[2] usually administers mercury for six to nine weeks; then pauses six weeks; then gives another six weeks' medication. During the first year he puts the patient through four courses; during the second year, three courses; and during the third year, two courses. During the fourth year he gives the iodide alone for six weeks, with corresponding intervals. Crocker advises stopping mercury about every six weeks to give the iodide for a week or ten days. At the end of six months, if the patient has been free from symptoms for two or three months, a month's pause may be made, to be followed by a six weeks' course of mercury. And so through the first year. During the second year he alternates a six weeks' mild mercurial course with a one or two weeks' course of the iodide. If still free from lesions, treatment may be suspended until some symptom crops out.

[1] Second Supplement to the Monatshefte f. prakt. Dermat., 1888.
[2] Gaz. des Hôp., 1889, No. 103.

Against these advocates of long-continued mercurial treatment there are others, no less eminent, who advocate the administration of mercury only during the duration of the symptoms, and for a few months afterward; then they advise to suspend all treatment until some new outbreak of the disease calls for it. In combating so insidious a disease as syphilis, it seems to me wisest to err rather on the side of too long continued treatment than on that of a too short course.

LOCAL TREATMENT. While internal treatment by mercury and the iodides is quite competent to remove the syphilodermata, their disappearance can be materially hastened by local treatment by means of mercurial applications. Ointments of metallic mercury, of the ammoniate, the red oxide, and the oleate, with solutions of the bichlorides, are the preparations most generally employed.

Many attempts have been made to abort syphilis by excision of the initial lesion, or its destruction by means of caustics. These have been failures in most instances. This is not to be wondered at in the light of R. W. Taylor's recent studies,[1] which show that "in the very first days of syphilitic infection the poison is deeply rooted beneath the initial lesion, and extends far beyond it, infecting all the parts beyond, even to the root of the penis." The initial lesion should be dressed with iodoform or calomel, or kept covered with dry lint powdered with either of these.

It may be said that in all the early and generalized syphilides local treatment needs practically to be applied only to lesions on exposed parts—that is, face, neck, hands, and wrists. The erythematous syphilide is usually so ephemeral that no local treatment is necessary. Mercurial baths may, however, be used for general outbreaks of syphilis. If the erythematous lesions persist upon the exposed parts, their departure can be hastened by the use of the ointment of the ammoniate of mercury rubbed in morning and night. The same ointment may be applied to the papular syphilide. A still more prompt effect can

[1] Med. Rec., 1881, xl., 1.

be produced, if the patient can be seen often enough, by the physician touching each lesion with a solution of the bichloride of mercury in alcohol three to five grains to the ounce, according to the size of the lesions and the profuseness of the eruption. Of course, if the eruption is very profuse, this plan cannot be followed. It is most applicable to a sparse and relapsing eruption. The mucous patch should be touched with the nitrate of silver stick or with an aqueous solution of chromic acid, ten grains to the ounce. Condylomata are best treated with dusting powders, preferably calomel, freely applied and covered with absorbent cotton.

The squamous syphilide of the palms and soles is often obstinate, but will usually yield to the persistent use of mercurial ointment. Sometimes it will be necessary to soften the part by having the patient wear sheet rubber next the skin for several days, and then use the ointment. If the parts are covered with a very much thickened epidermis, we may have to remove this by using salicylic acid, as in chronic squamous eczema. Mercurial plaster worn continuously is efficient.

The tubercular syphilide occurring discretely can be touched with the bichloride solution already mentioned. When in groups it is best treated by means of mercurial plaster.

The gumma may be covered with mercurial plaster or ointment. It should not be incised unless it shows unmistakable evidences of containing pus.

Ulcers following whatever lesion may be covered with mercurial plaster or ointment, or dressed with iodoform or aristol. If they become sluggish, they may require stimulation just as a simple ulcer does. To this end we may touch them with balsam of Peru, or add the same to our mercurial ointment. Some ulcers will do best under the treatment applicable to a simple ulcer, while the iodide of potassium is pushed.

Treatment of Congenital Infantile Syphilis. The most popular method is to spread upon pieces of flannel a mass of mercurial ointment of about the size of the end of the finger, and tie a piece of this one day over

each elbow-joint; another day over each groin; another, under each knee; and another, over the abdomen, allowing the movements of the child to work the ointment into the skin. Or hydrarg. cum creta, one grain three times a day, may be given by the mouth. Monti[1] recommends the following:

℞ Calomel. pur.,	gr. iss;	1	
Ferri lactatis,	gr. iij;	2	
Sacch. alb.,	gr. xlv;	3	M.
Ft. in pulv. No. x.			
Sig. 1–4 powders daily.			

The greatest attention must be given to the hygiene of the child and to its diet. Cod-liver oil should be given along with the mercurial. The nose must be kept clear, and if this is not practicable the child must be fed with a spoon. After the disappearance of symptoms tonics should be given, one of the best being the syrup of the iodide of iron. In all other respects the treatment of infantile syphilis is the same as that of the acquired form. Kaposi commends the tannate of mercury for children; dose, one-half to three-quarters of a grain three times a day.

Prognosis. The prognosis of syphilis as seen at the present time and in this country may be said to be good. Many cases go no further than a general erythematous or papular eruption, even when untreated. In one of robust health the disease is usually readily manageable. In debilitated subjects it sometimes proves intractable. The worst feature of the disease is the great uncertainty of its course, no one being able to promise confidently, no matter with what treatment, that relapses and late visceral syphilis will not occur. Therefore, the prognosis should be guarded, while it is remembered that rare cases of secondary infection attest the possibility of complete recovery.

The prognosis of congenital syphilis is not as good as is that of the disease as it affects adults. Many, perhaps most, of the cases seen in public institutions die. In private practice more can be done, and we should always count upon the remarkable reparative powers of childhood in

[1] Arch. f. Kinderheilkunde, 1885, vi., 1.

making our prognosis. A great deal will depend upon the inborn vigor of the child.

Syringomyelia, or **Morvan's Disease,** is a disease of the spinal cord, the consideration of which belongs rather to the neurologist than the dermatologist. It interests us because various cutaneous lesions occur during its course, such as glossy skin, hyperkeratosis, hyperidrosis, and paronychia with necrosis of the phalanges; and because in some phases it resembles certain stages of leprosy.

Syringo-cystadenoma. See Epithelioma, multiple, benign, cystic.

Tache Atrophique. See Atrophoderma.

Tache Bleue. See Pediculosis.

Tache Café-au-lait, seu **Congenitale,** seu **de Feu,** seu **hémorrhagique,** seu **Pigmentaire,** seu **Vasculaire,** seu **Vineuse.** See Nævus.

Tache Hépatique. See Chloasma.

Tache Ombrées. See Pediculosis.

Tan. See Lentigo.

Tanne. See Acne.

Tattoo. These well-known stainings of the skin by means of India-ink, vermilion, charcoal, and gunpowder, although at first objects of pride to the boy or girl, later are apt to become objects of aversion. They are very

FIG. 74.

Keyes's punch.

difficult to remove, especially if they are at all extensive. Patient perseverance in going over and over the small ones, that cannot be excised, with the electrolytic needle will sometimes greatly lessen them, though, of course, we thereby substitute a white cicatricial spot for a colored one. The needle should be introduced perpendicularly to the

skin and deeply, and numerous punctures arranged in rows thus made. This, of course, is a very slow procedure. Powder-grains may be removed by Keyes's punch, by making a half-turn over them, and then snipping off the small piece with the scissors. (Fig. 74.)

Ohmann-Dumesnil[1] recommends thrusting into the stain a bunch of six to ten very fine cambric needles, tied tightly together with silk thread, after dipping them into the glycerole of papoid. This is composed of:

℞	Papoid,	gr. ij;	75
	Aquæ destil.,	℥j;	4
	Glycerin. pur.,	℥iij;	12
	Ac. hydrochlor. dil.,	gtt. iij;	gtt. iij M.

If required, anæsthesia may be obtained by the ethyl chloride spray. The needles are to go deep enough to bring a few drops of blood to the surface. After puncturing, pour over the surface some of the solution and cover with antiseptic gauze. Remove this after two or three days. In this way the whole tattoo-mark is to be gone over. It may have to be gone over a second time.

J. Brault[2] recommends tattooing the marks with a solution of thirty parts of chloride of zinc and forty parts of sterilized water. The superficial eschar falls in five to ten days. The process may have to be repeated several times.

Teigne Faveuse. See Favus.

Teigne Granulée. See Pediculosis.

Teigne Imbriquée. See Trichophytosis corporis.

Teigne Pelade. See Alopecia areata.

Teigne Tondante seu Tonsurante. See Trichophytosis capitis.

Telangiectasis. This is an acquired dilatation of the blood vessels. The condition is well seen in rosacea. But it seems to me best to reserve the term for those cutaneous lesions in which acquired dilatation of the blood vessels of the skin is the only condition present.

[1] New York Med. Journ., 1893, lvii., 544.
[2] Ann. de derm. et de syph., 1895, vi., 33.

SYMPTOMS. The most common form of the disease is *nævus araneus*, or what is vulgarly called "*spider cancer*". It occurs in nearly all cases upon the cheeks, near the eyelids or bridge of the nose, but may occur anywhere. It is usually a single lesion, and consists in a small, central, bright-red, slightly raised dot from which radiate fine red lines. They sometimes become quite large, though usually not more than a half-inch in diameter. This form is seen in women and children. It occasionally follows some slight injury, but very often seems to come spontaneously.

Telangiectases in the form of simple dilated blood vessels of varying size and shape are often seen. Under the same heading Crocker places those slightly convex or flat, hemp-seed-sized, raised, bright-crimson or purplish spots met with in old people. Their favorite site is the upper part of the trunk, neck, and face.

ETIOLOGY. Telangiectases sometimes are the result of some slight injury, as the prick of a pin or a mosquito-bite. Sometimes they are due to continued congestion of the skin from disease of the internal organs. In other cases they result from a chronic inflammatory disease of the skin. They are very common upon the trunk in advanced life.

TREATMENT. The treatment of telangiectasis is simple. It is only necessary to introduce the electrolytic needle into the red central spot, and turn on a current of about two milliampères. The mode of operating is similar to that used in destroying superfluous hair, and is described in the section on Hypertrichosis. It may be destroyed by touching it with a drop of nitric acid, or puncturing it with a white-hot needle.

Tetter. See Eczema.

Tinea Amiantacea, seu **Asbestina**, seu **Furfuracea.** See Seborrhœa.

Tinea Circinata, seu **Cruris**, seu **Imbricata.** See Trichophytosis corporis.

Tinea Decalvans. See Alopecia areata.

Tinea Favosa. See Favus.

Tinea Kerion. See Trichophytosis capitis.

Tinea Nodosa. This disease is also named trichomycosis palmellina and nodositas pilorum microphytica. This is a condition of incrustation of the hairs with a fungous growth forming dry, hard, elongated, formless masses varying in color from olive to brownish yellow, giving a rough feel to the hair. The hair follicles are unaffected, and the hair is firmly seated in them. The hair may be simply incrusted or it may be split. The free end of the hair is more affected than the proximal end. The spores composing the incrustations are similar to the trichophyton, but larger. It is often seen on the axillary hairs. It differs from piedra in not affecting the scalp hair and in its fungus.

Tinea Sycosis. See Trichophytosis barbæ.

Tinea Tondens seu **Tonsurans.** See Trichophytosis capitis.

Tinea Trichophytina. See Trichophytosis.

Tinea Versicolor. See Chromophytosis.

Trichauxis. See Hypertrichosis.

Trichiasis. This is a congenital or acquired displacement of the ciliæ so that they point backward and scratch the cornea. Both lids of both eyes are usually affected.

The best TREATMENT is the destruction of the hair by means of the electrolytic needle, as described in the section upon Hypertrichosis.

Trichoclasia. See Trichorrhexis nodosa.

Trichoptylose. See Trichorrhexis nodosa.

Trichomycose Noueuse. See Piedra.

Trichomycosis Nodosa. See Leptothrix.

Trichomycosis Palmellina. See Tinea nodosa.

Trichinosis Cana vel **Discolor.** See Canities.

Trichonosis Furfuracea. See Trichophytosis capitis.

Trichophytie Circinée. See Trichophytosis corporis.

Trichophytie Sycosique. See Trichophytosis barbæ.

Trichophytosis. A contagious disease of the skin and hair, occurring most often in children, due to the invasion of the epidermis by the trichophyton fungus, and characterized by the formation of circular or annular scaly patches, and partial loss of hair.

As its name indicates, this is a disease produced by the trichophyton fungus. It may find lodgement and grow on the general cutaneous surface, in the scalp, beard, or nails—that is, in the epidermic structures. In these different localities it develops so differently as to produce very different clinical pictures. I shall describe each one by itself and give its differential diagnosis, treating all matters of etiology and treatment collectively.

Trichophytosis Corporis. Synonyms: Tinea circinata; Herpes circinatus; (Fr.) Herpès circiné, Trichophytie circinée; (Ger.) Scheerende Flechte; Ringworm of the body.

Symptoms. This is the simplest and most readily cured of all the forms of ringworm. It begins as a small, pale-red, slightly raised spot, which, growing, spreads out into a round, sharply defined, scaly patch; then it clears up in the middle, becomes ring shaped, and advances with a raised border that may be vesicular; or crusted from the drying of the vesicular contents; or papular and scaly. After a time it either ceases to spread, or, enlarging, the edge of the ring becomes broken in places. At last it undergoes spontaneous involution. There may be but a single patch or there may be a number of patches. If two circles meet at their peripheries, they coalesce and form gyrate figures. Very often rings do not form, and we have only a round, sharply defined, scaly, circular patch. The exposed parts—face, hands, and neck—are the most common sites for the eruption. In rare cases ringworm may be widely disseminated over the body. A slight amount of itching is the only subjective symptom, and that may be wanting.

Another form of ringworm of the body is that known as *eczema marginatum*, which is ringworm located in the crotch or axilla. It is usually of a more highly inflammatory character than the same disease on other parts of

the body, and resembles an eczema very closely—in fact, it is often complicated by an eczema. The edge of the patch is sharply defined, raised, scalloped, papular, and scaly, while the center may be smooth or pigmented and crusted. The patch often attains large dimensions, running down the inside of the thigh, up over the abdomen,

FIG. 75.

Trichophytosis corporis.
(From Prof. G. H. Fox's service in the Vanderbilt Clinic.)

and backward over the perineum. Usually the inside of both thighs is affected. There is considerable itching. The same symptoms are presented when the axillæ are affected. There is also a true eczema of the crotch that is not due to the trichophyton, but resembles the form just described.

Tinea imbricata is supposed to be a very aggravated form of body ringworm occurring in tropical countries. But Manson[1] says that it differs from ordinary ringworm

[1] Brit. Journ. Dermat., 1892, iv., 5.

in affecting a very large part of the body at the same time; in avoiding hairy parts and sparing the hair; in an absence of signs of inflammation; in not forming a single ring, but ring within ring, and recurring in parts gone over; in having large, abundant scales; in profuse fungous growth; in always breeding true in inoculation-experiments; and in occurring only in certain parts of the world.

DIAGNOSIS. Trichophytosis corporis is readily diagnosed, as its appearance is distinctive. *Favus* of the body may spread out into a circular patch, but soon it will show the distinctive sulphur-yellow cupped crusts. *Psoriasis* on the body will have a brighter red color; its scales will be more abundant, thicker, and brighter; it will be found on the tips of the elbows and over the knees, and will be more profuse and disseminated; and examination of the scales will show an absence of fungus. The scaling papular *syphilide* or the squamous syphilide will not itch; there will be no fungus in the scales; the color will be that of raw ham; the base will be more infiltrated; it will run a more chronic course; and will not yield so readily to treatment. *Seborrhœa* of the chest may occur in rings, but its location will suggest its origin; the skin is greasy, the scales rub off easily, and there is no fungus in them. *Eczema* of the crotch or axilla differs from ringworm of the same region in not having a so sharply defined and scalloped or festooned border; in forming a more evenly diseased patch with no sound skin in it; and in having no fungus in the scales taken from it. *Pityriasis rosea* is more widely distributed than is ringworm, and spreads more rapidly: it is not so scaly; has a more yellowish center; is usually most abundant on the trunk; shows no fungus under the microscope; and the eruption is made up of both macules and rings.

Trichophytosis Capitis. Synonyms:[1] Herpes tonsurans seu circinatus, seu squamosus; Tinea tonsurans, seu tondens; Porrigo furfurans; Dermatomykosis tonsurans

[1] I can mention here only the more common ones, as their number is legion.

(Köbner); (Fr.) Herpès tonsurante, Teigne tondante ou tonsurante, L'herpès circiné parasitaire; (Ger.) Scheerende Flechte; (Slav.) Ringskurv; Ringworm of the scalp.

SYMPTOMS. This form of ringworm is seen almost exclusively in infants and children. As puberty or early adult life is reached the disease, no matter how long con-

FIG. 76.

Trichophytosis capitis.[1] (Fox.)

tinued, and how severe it may be, tends to get well of itself. It begins as a single vesicle or a small, insignificant, red, scaly spot that would pass without suspicion of its nature unless other cases of ringworm put us on our guard. From this small beginning the disease spreads peripherally to form a circular patch, which is red, cov-

[1] G. H. Fox: Skin Diseases of Children. Wood, N. Y., 1897.

ered with grayish scales, sharply defined, perhaps slightly elevated, and partially bald. Inspection of the patch will show a number of broken-off stumps of hair with split ends. These stumps are characteristic of the disease. The hair growing in and about the patch is dry, lusterless, split, and brittle. Attempts at epilation break it off, and if it is indented with the finger-nail it will take a sharp angle and retain it. This shows that it has lost its resiliency. Apparently healthy hairs are sometimes growing from the patch. The size of the patch varies greatly. It may be no larger than that of a ten-cent piece, or it may be so large as to denude a good part of the scalp. These large patches are usually formed by the coalescence of several small ones, and then they lose their circular outline and become scalloped. There may be but a single patch, or there may be a number of them. After attaining the size of a half-inch to one inch in diameter the patches may remain stationary in size or increase slowly. The most frequent sites are the vertex and parietal regions. Pruritus of greater or less degree is usually complained of, and it may be the first symptom that draws attention to the child's scalp. The course of the disease is exceedingly chronic. It does not produce permanent baldness.

This is the typical "ringworm," as seen in the vast majority of cases. Sometimes, instead of being scarcely or not at all raised above the surface of the skin, the patch, usually a single one, begins to swell up, becomes raised, uneven, and boggy, and we have the condition described as *kerion* (which see). Another variety is what Liveing terms *bald tinea tonsurans*. This begins as an ordinary ringworm, but after a time the hair all falls out, the scalp is smooth and without scales, as in alopecia areata, and at its border there may be found short broken hairs, like those seen in the latter disease. At first this change takes place in one patch alone, and we will be guided to a right diagnosis of the disease by the appearances of the other patches. Later, these too become altered, and then it would be hard to make the diagnosis without the history of there having been scaly patches. This is an infrequent form of the disease.

Still another form is called *disseminated ringworm.* Here the patchy, areated character of the disease has disappeared, the hair has apparently grown in nicely, and there is seemingly only a scurvy condition of the scalp. This is a dangerous form, because the child is often regarded as well and yet is quite capable of spreading infection. Careful examination of the case, by causing the child to stand with his back to the physician, and turning the hair slowly backward against its direction of growth, will show here and there "stumps," and also the presence of hairs that stand up from the head for a few moments. Normal hair falls quickly back into place, which is not the case with hair affected with ringworm.

A *pustular form* is sometimes described. It is simply a ringworm occurring in a strumous subject, in whom all inflammatory skin diseases are prone to assume a pustular character.

Diagnosis. Trichophytosis capitis must be differentiated from alopecia areata, favus, eczema, seborrhœa, and psoriasis. From *alopecia areata* it differs in being scaly; in not producing perfectly bald patches; in its much slower progress; in the presence of "stumps;" and in having the tricophyton fungus in the hair, as seen under the microscope. From *favus* it differs in the absence of the sulphur-yellow cupped crusts of that disease; in not having such heaped-up asbestos-like crusts; in forming distinct round patches; in the more brittle character of its hair; in not producing red, smooth, permanently bald spots that later become white and cicatricial, and in showing a marked tendency to get well of itself as puberty is reached. The diagnosis between them by the microscope is not easy without a knowledge of the appearances on the skin. The spores of favus are more polymorphous and somewhat larger than those of trichophytosis, and its mycelia are more abundant than its spores. From *eczema* it differs in the more circumscribed and circular character of its patches; in being less itchy; and in the presence of broken-off hairs and stumps. The presence of these broken-off hairs and stumps, and of the fungus in the hair and scales,

will sufficiently distinguish ringworm from both *seborrhœa* and *psoriasis.*

Trichophytosis Barbæ. Synonyms: Tinea sycosis, seu barbæ; Sycosis parasitaria seu parasitica; Herpes tonsurans barbæ; (Fr.) Trichophytie sycosique, Sycosis parasitaire; (Ger.) Parasitische Bartfinne; (It.) Sicosi parasitaria; (Eng.) Barber's itch, Ringworm of the beard.

When the trichophyton invades the beard, at first it forms simply a superficial scaly circular patch which

FIG. 77.

Trichophytosis barbæ.
(From Prof. G. H. Fox's service in the Vanderbilt Clinic.)

increases in size, just as on the scalp, producing broken-off hairs and a partially bald area. There are usually several of these areas upon the chin and cheeks. If not checked by treatment, we have the more characteristic develop-

ment of the disease, in which there will be either some pustules pierced by hairs, or else a group of large nodular swellings, varying in size from that of a split pea to that of a half-cherry, arranged in the form of a circle. There are usually several groups of them. The nodules are prominently raised and usually rounded. (Fig. 77.) They are of a congested red or purple color. They may be hard and scaly; or give exit to a sticky discharge; or, rarely, suppurate. The hair over them is broken, or more or less wanting. Usually itching and burning are complained of.

Diagnosis. The disease is to be differentiated from sycosis, pustular eczema, and the tubercular syphilide. From *sycosis* it differs in affecting the lower part of the face and sparing the upper lip; in presenting broken-off hair; in having grouped nodules; and in the presence of the fungus in the hair. Sycosis is more acute in its manifestations, and is characterized by its many discrete pustules pierced by hair. From *eczema* it differs in the same points as it does from sycosis, and also in being less crusted, and in the ease with which the hair can be plucked or will break. Eczema is also a disease of the skin and not of the hair. The *tubercular syphilide* bears a resemblance to trichophytosis barbæ at times. It differs from it in forming but a single group, in being of a darker color, and in undergoing a steady course of development toward final recovery, leaving, not infrequently, permanent scars. Other symptoms of syphilis will often be found, and its whole history will be different.

Trichophytosis Unguium, or onycho-mycosis, is ringworm as it affects the nails. It begins as a change in color of the nail-substance and with a loss of its transparency. The nail becomes uneven and thickened, and its edge, which is usually the part first attacked, becomes raised from its bed by an accumulation of scaly matter under it. A progressive atrophy takes place, and at last the nail breaks and falls either in part or as a whole. There may be but one nail affected, or all the nails, both of the hands and feet, may be attacked, then usually con-

secutively. Many obscure cases of atrophy of the nail will be found to be due to ringworm when the scrapings from them are examined under the microscope.

DIAGNOSIS. The appearances presented by the nails are so similar to those seen in psoriasis and other diseases in which the nails become atrophied, that a positive diagnosis can be made by the microscope alone, unless there should be symptoms of the one or the other disease present elsewhere on the body as a guide.

Having now described the different varieties of ringworm with their differential diagnosis, we pass on to study the factors common to all.

ETIOLOGY. The cause of the disease is contagion with the trichophyton fungus. This contagion may be direct, from person to person, or indirect by means of brushes, towels, clothing, and the like. It is possible that the air may become so full of the fungus in epidemics in crowded children's asylums that contagion may be by means of the fungus lighting upon the head or body. The disease is very contagious, much more so than is favus.

As the disease is quite common in dogs, cats, and horses, constituting in them one form of mange, they are a very frequent source of contagion. Ringworm of the scalp is often communicated by means of brushes and headgear. Ringworm of the beard is conveyed by means of brushes, towels, and the barber's fingers. Ringworm of the nail comes from scratching. Some skins seem to furnish a better soil for the growth of the fungus than do others. Children have ringworm of the scalp; adults almost never. There is no peculiarity of constitution that predisposes to the disease. It attacks all classes and is seen in all conditions of society, though, of course, it is most common among the crowded poor.

PATHOLOGY. The fungus of ringworm, has its habitat in the epidermic structures of the skin. On the general cutaneous surface it is so superficially located as to be readily destroyed. When it attacks the hair and nails it penetrates below the skin in their epidermic structures, and is much more difficult of cure.

The fungus (Fig. 78) consists in mycelia and conidia (spores), the proportion of which to each other varies; in the hair of the scalp and beard the number of spores far exceeds that of the mycelia. Sometimes they are so numerous as to be crowded together in lines. On the general surface the mycelia are far more numerous. They are long, slender, branched, straight or crooked bodies. The spores are round, small, and refract light. Having become lodged in the skin, the fungus always sets up a certain amount of irritation by its processes of growth. If

FIG. 78.

Trichophyton tonsurans in hair shaft and follicle. (After KAPOSI.)

it lands upon hairy regions, it attacks the hair secondarily, passing down the walls of the hair follicle to a greater or less depth before it penetrates the cuticle of the hair and gains access to its substance. Having gained access, it vegetates freely, and may often be traced throughout the whole length of the hair. Robinson and others have found the fungus in the peri-follicular tissue. Its presence always causes more or less peri-folliculitis. If the

peri-folliculitis is very great, permanent baldness may result. In trichophytosis unguium the fungus grows in the substance of the nails.

Sabouraud [1] and others have demonstrated that there are several fungi producing ringworm, the most common being the *microsporon audouini*, and the *trichophyton endothrix* and *ectothrix*. C. J. White,[2] repeating Sabouraud's investigations in this country, says that fifty-two per cent. of ringworm in this country is due to the microsporon, most all being on children's scalps. In the hairs the spores are small, round, glistening, and placed closely together. They are more equal in size than are those of the other forms of ringworm. The microsporon does not grow well on the skin. The other forms of ringworm fungi rarely affect the scalp. The trichophyton endothrix in the hair runs in lines parallel to the long axis of the hair. Its spores are quadrangular, with rounded corners, and vary considerably in size. It causes most cases of ringworm of non-hairy parts, and some cases of ringworm of the scalp, especially those that have an eczematous appearance. The ectothrix variety most often affects the bearded portion of the face, and causes the deep or suppurating forms of ringworm. It also produces kerion of the scalp. The spores resemble the preceding, but grow around the hairs rather than in them. It is a pyogenic fungus.

TREATMENT. There is no disease of the skin much more easy of cure than trichophytosis of the general surface of the skin, and none much more difficult of cure than trichophytosis capitis.

Trichophytosis corporis may be readily cured with almost any slightly irritating and astringent application, and by all the antiparasitics. It may be cured by means of common ink, or by using vinegar in which a copper coin has been soaked. The scales should be removed with soap and water, and an ointment of sulphur, or ammoniate of mercury, or chrysarobin, or pyrogallol, be applied; or simply paint the patch with tincture of iodine, acetic or sulphurous acid, or a solution

[1] Diag. et Trait. de la Pelade et des Teignes de l'Enfant. Paris, 1895.
[2] Journ. Cutan. and Gen.-Urin. Dis., 1899, xvii., No. 1.

of bichloride of mercury, three to five grains to the ounce. The last is a good method for adults, as it does not stain the skin, and one application will usually cure the disease. It is rather too strong for children. Other applications are a saturated solution of hyposulphite of soda: oleate of copper, half a drachm to the ounce of ointment; and salicylic acid, five or ten per cent. strength, which by no means exhausts the list.

Trichophytosis cruris et axillæ, or *eczema marginatum*, is not so easy to cure as the preceding variety, but it can be cured by any of the means detailed above. In using chrysarobin, here as elsewhere, we should bear in mind its irritant qualities. Taylor has recommended painting the parts with two to four grains of bichloride of mercury in one ounce of tincture of benzoin. Hardaway speaks well of modified Wilkinson's ointment. Some cases will make a good recovery under an ointment containing oil of cade, one drachm to the ounce. This is specially good after the use of sulphur or other antiparasitic to kill the fungus, as it is curative of the eczema that often remains.

Trichophytosis capitis is the most obstinate form of ringworm to cure. The fungus is present abundantly deep down in the skin, and each hair is a separate focus of disease. The difficulty we have to contend against is to cause our remedies to enter the skin deeply enough to destroy the fungus. Nature gives us a hint as to the cure of the disease when a kerion forms that is not infrequently followed by disappearance of the disease. Most of the so-called remedies for ringworm are irritants to the skin, and do good quite as much by the irritation they cause as by their parasiticide properties.

If we see the case at its earliest stage, we may sometimes succeed in aborting the disease by the application of the bichloride of mercury, five or ten grains to the ounce. Usually when the case is brought to us it has gone too far for aborting it. Then we may sometimes cure the case promptly, but most often it is an affair of months and, perhaps, years. The first requisite for a cure is faith on the part of the patient, so that the second element, persistency, can come into play; and then by the persevering

use of parasiticides a cure may be effected. As each case is a source of contagion, steps must be taken to isolate the case if it occur in an asylum or school. If it occur outside of an institution, the parents must be cautioned not to allow the child's hat or clothing to be worn by any other child, and the child must be taken out of school. To assure still further the safety of others, an antiparasitic must be applied to the child's head, such as a one or two per cent. solution of salicylic acid in alcohol and castor oil. The child should also wear a linen cap over the whole head. These regulations are difficult to carry out in private practice.

The ringworm patch or patches should be scrubbed with soap and water so as to remove all the scales before we make any local application. Tar soap is a good one to use for the purpose. Then the hair should either be cut short, pulled from or shaved off the patches, and for about a quarter of an inch about them. Now the case is ready for the chosen parasiticide. Whatever is used in the form of an ointment or oil, it should not be smeared over the surface, but worked in, as it were. The remedies we use are exhibited in the form of ointments, oils, varnishes, pastes, solutions, and plasters. It is, unfortunately, necessary to give a lengthy list of remedies from which the reader may select. One of the oldest and most used of them is the officinal sulphur ointment, full strength or diluted according to reaction. Here, as elsewhere, when an ointment is mentioned, it is to be understood that it may be made with lard, vaseline, lanolin softened with oil, plasment (mucilage of Irish moss), or gelanthum. The last is to be preferred because it is not greasy, sinks readily into the skin, and leaves a slight film over the patches that prevents, to a certain extent, the escape of the spores into the air. The persistent daily use of sulphur ointment, combined with epilation, and scrubbing of the patch with soap and water about once a week, will cure the disease. Sulphur may also be used in combination with other drugs. One of the most efficient remedies is

℞ Ol. tiglii, ʒj; 4
Ungt. sulphuris, ʒj; 30 M.

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This is to be rubbed into the patch once a day until symptoms of reaction appear, the patch becoming swollen and red. When this subsides the patch will be smooth like as in alopecia areata. There is always danger of producing permanent baldness, but thus far in all my cases the hair has come in all right. As nothing has yet been found to render sulphur soluble in any amount, it must always be exhibited in ointment- or paste-form.

Mercury is another old stand-by. It may be used as a solution of the bichloride in alcohol (grs. j–iij ad ℥j), whose application should not be intrusted to any one but a physician or trained nurse. It is to be used two or three times a day, its effect carefully watched, and, of course, it should not be applied to large surfaces. It may be employed as recommended by Kerley,[1] who reports having cured a number of cases in from two to twenty weeks by using a solution made by adding two grains of the bichloride dissolved in sufficient alcohol to a half ounce each of kerosene and olive oil, daily rubbed into patches as well as applied all over the scalp. When inflammation is caused, the application is stopped, and a simple ointment is used until the irritation subsides. Then the bichloride is again applied. The scalp is to be washed often. He thinks that a cure will be hastened by using a saturated solution of iodine on alternate days with a bichloride solution. Crocker thinks highly of the bichloride, three grains dissolved in alcohol, to the ounce of turpentine. Tincture of benzoin is a good excipient for the bichloride, according to Leviseur,[2] who recommends the application of it, one to two parts to three hundred parts of benzoin, once a week, with the daily use of salicylic acid ointment in ten to twenty per cent. strength. All the mercurial ointments are useful, but are not so prompt in their action as other remedies.

The remedies recommended in the treatment of ringworm of the body are all of use in the same disease of the scalp, and need not be repeated here. The main modification is the epilation that should precede their application. Instead of

[1] New York Med. Journ., 1891, liv., 396.
[2] Med. Rec., 1889, xxxv., 594.

using tincture of *iodine*, the English authors commend Coster's paint, made of two drachms of iodine and six drachms of the light oil of wood-tar, which is to be firmly applied with a stiff brush. A black crust will form after two or three days, which should be removed with the forceps. The part should then be washed with soap and water, and the paint again applied. Two or three applications of it may be made to an infant's scalp, or it may be continued longer in children over four years of age. The best way of using iodine, and in my experience the best treatment for ringworm, is to rub up one drachm of the crystals of iodine in one ounce of goose-grease. This is to be well rubbed into the patches with a stencil- or stiff paint-brush. It causes but little reaction and cures speedily. The iodine is found staining the hairs deeply when the hairs are examined under the microscope.

Chrysarobin in ten per cent. strength in traumaticin or collodion is good, its tendency to produce dermatitis being ever borne in mind. *Pyrogallol* in five to fifteen per cent. in the same excipients, with or without the addition of half a drachm of salicylic acid to the ounce, is a reliable preparation. *β-naphtol* and *hydronaphtol* are commendable. One of the neatest methods for treating ringworm is that commended by Dockrell,[1] and it has proved useful in my hands. He directs that after shaving and washing the head with a five per cent. hydronaphtol soap and hot water, the part is to be dried and covered with strips of ten per cent. hydronaphtol plaster so that they overlap at the edge. Over all is to be poured some melted ten per cent. hydronaphtol jelly. At the end of four days the plaster is to be removed, the head again washed, and a twenty per cent. plaster applied and worn for one week. Finally a ten per cent. plaster is to be worn for ten days. If not well then, the process may be repeated. Naphtol may be used as a one per cent. solution in alcohol, or in the form of a paste, as recommended by Kaposi:[2]

[1] Lancet, 1889, ii., 1110.
[2] Wien. med. Wochenschr., 1881, xxxi., 617.

℞	β-Naphtol.,	gr. xv;	1	
	Spt. sap. viridis,	gr. xxx;	2	
	Alcohol.,	ʒj ʒiss;	50	
	Bals. peruv.,	gr. xxx;	2	
	Sulph. lot.,	ʒijss;	10	M.

Either may be applied twice a day for two or three days, and then followed by a thorough scrubbing with green soap. *Thymol* in five to ten per cent. strength, dissolved in chloroform and olive oil, is recommended by Malcolm Morris. Formalin is commended by some, but condemned by others, on account of the severe irritation it is capable of setting up.

Harrison[1] endeavored to effect entrance of his remedies to the deeper parts of the skin by first applying to the scalp solution No. 1, composed of half a drachm of potassium iodide in one ounce of liquor potassæ. After a few days he applied solution No. 2, composed of three grains of corrosive sublimate to one ounce of sweet spirits of nitre or of water. This treatment requires careful watching. Foulis[2] recommends rubbing turpentine into the scalp, after cutting the hair, until it smarts. Then the scalp is to be scrubbed with ten per cent. carbolic soap, dried, and painted with two or three coats of tincture of iodine. When dry the whole head is to be anointed with carbolized oil, 1 : 20. This procedure is to be carried out once a day. Alder Smith has found useful a saturated solution of boric acid, as follows:

℞	Ac. boric.,	ʒiv;	15	
	Ætheris,	ʒv;	150	
	Alcoholis,	ad ʒxx;	ad 600	M.

It is to be freely applied after washing the head in the morning, and two to five times during the day.

H. B. Sheffield[3] recommends clipping the hair close, and applying over the whole scalp once a day for five days

℞	Ac. carbolici,) Ol. petrolati,)	āā ʒss;	āā 65	
	Tinct. iodini,) Ol. ricini,)	āā ʒij;	āā 110	
	Ol. rusci,	ad ʒiv;	ad 500	M.

[1] Brit. Med. Journ., 1885, ii., 134. [2] Ibid., 1885, i., 536.
[3] New York Med. Journ., 1898, lxvii., 680.

This is to be wiped off with a cloth on the sixth day, the hair clipped, and the scalp thoroughly washed with green soap. On the seventh day the treatment is to be repeated, and so on for three or four weeks, or until no more fungus is found and new hair appears. A ten per cent. sulphur ointment is then to be used for a few days, and for two weeks afterward

℞	Resorcin., Ac. salicylici,	āā ʒj;	āā 16	
	Alcoholis,	ʒj;	120	
	Ol. ricini,	ad ʒiv;	ad 500	M.

In very chronic cases and in the disseminated form it may be necessary to blister the patch by means of croton oil or acetic acid. Croton oil must always be used with caution and to small areas, as it is capable of producing permanent baldness. One part in ten of olive oil is usually sufficient, but the strength may be increased till we have it sufficiently strong to cause a mild degree of pustulation, when the hairs may be easily plucked. In disseminated ringworm a drop of the pure oil may be applied to each diseased follicle, and as soon as a pustule forms the hair should be pulled out. In very obstinate cases electrolysis may be practised to individual hairs, which, like the croton oil, will permanently destroy the hair.

Epilation is of positive value in treating this obstinate disease, even though the hair does break off. Some hair with its fungus will come out, and the follicular mouths will be rendered more open for the entrance of the applications, which should always follow epilation. Besnier epilates around the patches, and asserts that then the disease rarely spreads to neighboring parts.

Treatment should be continued until there are no more stumps or broken-off hairs to be seen; till the microscope fails to reveal any fungus in the hair after prolonged search, and until the scalp is no more scaly. It is well to use the following:

℞	Hydrarg. ammon.,	℈j;	3·75	
	Hydrarg. chlor. mitis,	℈ij;	7·50	
	Vaselini,	℥j;	30	M.

or a sulphur ointment for several months after apparent cure.

Trichophytosis barbæ is treated along the same lines as when the scalp is the seat of the disease. The beard should not be shaved, but cut short with scissors. Here epilation is of more positive value, as the hairs over the nodules will come out easily. It is possible to abort the disease before it has implicated the hair by the application of a solution of five to ten grains of bichloride of mercury in alcohol. A ten per cent. solution of resorcin or an ointment of the same strength may accomplish the same end. After the disease has got fully under way, systematic epilation, daily shaving by the patient himself, and the thorough application of one of the parasiticide preparations mentioned in the preceding section, especially the iodine goose-grease, will effect a cure.

Trichophytosis unguium may be treated by producing a paronychia. This may be done by Pellizzari's[1] method of keeping green soap upon the nail under a rubber cot for a few days, until the nail is softened. Then equal parts of olive oil and pyrogallic acid are to be applied till the nail loosens, when it is to be removed and the finger dressed with iodoform. Thin[2] recommends scraping the affected nails very thin, applying liquor potassæ to soften them, and then dabbing on creosote, or acetic acid, or a solution of two to five grains of bichloride of mercury in alcohol. Crocker speaks well of using Harrison's plan for treating ringworm of the scalp, which see. Solution No. 1 should be applied after scraping and kept on for fifteen minutes, covered with oiled silk; then No. 2 applied in the same way and kept on for twenty-four hours. These should be repeated till the cure is effected. If the skin should become tender or begin to peel, the solutions should be stopped, and one of hyposulphite of soda used until the skin heals. A ten per cent. salicylic acid plaster worn constantly over the nail is a good plan of treatment.

PROGNOSIS. All forms of ringworm, excepting that of

[1] Giorn. Ital. d. Mal. Ven. e del Pelle, March, 1888.
[2] Practitioner, May, 1887, et seq.

the general surface of the body, are very obstinate, but persevering and intelligent treatment will cure them all. The most obstinate form is that of the scalp, and a speedy cure should never be promised. It must always be remembered that as puberty is reached it tends to spontaneous cure.

Trichoptilosis.
Trichorrhexis Nodosa. } See Atrophia pilorum propria.
Trichoxerosis.

Tubercula Miliaria.
Tubercula Sebacea. } See Milium.

Tubercule Anatomique. See Tuberculosis verrucosa cutis.

Tuberculosis Cutis. SYMPTOMS. This is a rare disease, having been met with by Chiari but five times in between 3000 and 4000 post-mortems of those who had died of tuberculosis. It occurs almost exclusively about the mucous orifices—mouth, anus, vulva, and glans penis. Crocker describes the disease as follows: "The lesions consist of one or more discrete, shallow, not painful ulcers, which form apparently spontaneously, have an irregular, eroded, moderately infiltrated edge, and when the crusts, which soon cover them, are removed, show a reddish-yellow, granular surface, with a thin, scanty secretion. They never heal, but spread slowly and continuously, and may coalesce with neighboring ulcers, becoming serpiginous; they may thus extend over an area of one or more square inches; but, as a rule, they are small. When on mucous membranes, yellow miliary papules exist near them." They are due to local infection with the tubercle bacillus, and are a part of a general tuberculosis. Their diagnosis is difficult, though their nature may be suspected on account of the other and evident symptoms of the primary disease.

TREATMENT. Treatment is unavailing, though iodol, iodoform, or aristol may be applied.

Tuberculosis Verrucosa Cutis. Synonyms: **Verruca** necrogenica; Lupus verrucosus; Scrofuloderma verrucosum; (Fr.) Lupus sclereux, ou l. papillaire verruqueux; Anatomical tubercle; Post-mortem warts.

These names have been given by different writers to what may be regarded as simply varying aspects of the disease described by Riehl and Paltauf[1] as tuberculosis verrucosa cutis. It is one of the rare skin diseases, but not so very infrequent as statistics would show. It was

FIG. 79.

Tuberculosis verrucosa cutis. (After HYDE.)

met with four times in 3726 cases in G. H. Fox's service at the Vanderbilt Clinic in 1892.

SYMPTOMS.[2] The disease occurs usually in the form of a single round or oval patch. There may be several such patches. If two patches join, irregularly shaped patches, with scalloped border, may form, and perhaps become serpiginous. In size the single patches vary from that of a lentil up to that of a silver half-dollar. Around the patch is a narrow zone of erythema, of a bright red, that

[1] Vierteljahr. f. Derm. u. Syph., 1886, xiii., 19.

[2] The description here given is taken, for the most part, from the above-mentioned article by Riehl and Paltauf.

disappears under pressure. Its surface is smooth, and often more shiny than the normal skin. Toward the next zone it is slightly elevated. Its follicular openings are preserved.

Inside of this zone is a row of small, discrete, superficial pustules, whose covers are so thin that they break easily, and we find only the crusts and scales left by them. The color of this zone is brown or livid red, and it cannot be pressed out entirely, showing that there is some infiltration of the skin. This zone is slightly raised, but the one to its inner side is markedly so. It has also an irregularly knobby surface, becoming distinctly warty toward the center of the growth, the warts being rounded or pointed. The nearer the center the warts are the larger they are, some of them being five to seven millimeters long. The whole surface of this zone is more or less scaly or crusted. The color is brownish red. The warty growths are often close together with fissures between them, and little erosions and pustules. If the patch is pinched up between the fingers, little drops of pus may be made to well up from between the papillæ. The mouths of the follicles are destroyed. In some cases acute inflammation may occur, and the patch will swell up and become more angry-looking.

After a time the patch begins to flatten in the middle by the disappearance of the warty growths, and at last becomes changed into a smooth or slightly scaling cicatrix, which is thin and soft, with a delicate sieve- or net-like appearance.

The patch is always freely movable upon the underlying parts, and usually gives rise to no subjective symptoms. Sometimes pain is complained of on pressure. The growth is by the addition of new lesions on the periphery of the old patch, and is usually very slow, and at intervals with pauses between. It is a chronic affection, showing no tendency to spontaneous recovery.

Such are the typical disease and its course. In the description of the different diseases named above will be found some deviations from the type, but they all agree in the main, and are probably all one and the same dis-

ease. It is met with most often upon the back of the hands and fingers, but may occur anywhere.

ETIOLOGY. The cause of this form of tuberculosis is the inoculation of the skin with the tubercle bacillus, which has been found in sections taken from the patches. The disease is seen most frequently in men, and is specially prevalent in butchers and those who have to do with animals, such as hostlers and drovers. Dead-house attendants are also its victims not infrequently. Cases have been directly traced to inoculation with tubercular tissue.

DIAGNOSIS. Though allied to *lupus*, it differs from it in the entire absence of the characteristic lupous tubercles, and of the tendency to ulceration; in the manner of healing in the center by a scar in which no relapse takes place; in its superficial situation in the skin; in the purulent matter that can be squeezed out from between its papillæ; and in the relatively late time of life at which it appears. From *syphilis* it differs in its more chronic course; in the absence of a wall of infiltration about it; in its color; and in showing no tendency to break down and ulcerate.

TREATMENT. The growth may be curetted away, and the wound afterward treated with pyrogallol as in lupus. Or it may be destroyed by the galvano-cautery or by electrolysis. Or it may be covered with a twenty-five per cent. salicylic acid creosote plaster. Crocker advises the use of this plaster, to be followed with the fuming nitrate of mercury applied with a piece of wood. I have found the plaster sufficient in itself. Or it may be destroyed by any powerful caustic, but it must be destroyed entirely or it will crop out again.

PROGNOSIS. The disease is more easily curable than is lupus, and, as a rule, the growths are readily removed.

Tumeurs Folliculeuses. See Molluscum sebaceum.

Tyloma, seu Tylosis. See Keratosis palmaris et plantaris.

Tylosis Linguæ. See Leucoplakia.

Ulcers. Ulceration is a symptom common to many diseases, such as lupus, syphilis, scrofulodermata, and other

destructive processes. For these the reader is referred to the sections treating of the disease of which they form a part. I shall here deal briefly with those ulcers of the leg that form so large a part of every dermatological clinic, and that are usually called varicose ulcers. They are located most often over the anterior surface of the leg and on its lower half. They may be superficial or deep. They are irregular in shape with sloping or undermined edges, and with a more or less wide zone of redness and infiltration of the skin about them. Their bases may be covered with flabby granulations; or be smooth and glazed, with thin, scanty secretion; or they may discharge a great deal of sero-purulent matter. Some of them bleed readily, some do not. There may be but one ulcer, or there may be several of them. One or both legs may be affected. The ulcers may be small, or so large as to encircle the leg and occupy more than half its length, and they may attain this size either by gradual extension of themselves or by the junction of several ulcers. They begin not infrequently as a number of small shelving ulcers on a red and densely infiltrated base. These enlarge rapidly and form a large ulcer. The patient complains of more or less spontaneous pain, and the ulcers are often very tender. The foot and leg are sometimes greatly swollen and feel brawny. It will be noted that the foot and leg are marked with dilated veins, and varicosities can be felt sometimes like whip-cords under the skin. The deep veins are generally swollen at the same time, though they cannot be felt so readily. Usually both legs are affected.

Etiology. These ulcers are predisposed to by standing for hours at a time, and it is standing in one position that is particularly obnoxious. It is therefore in car-drivers, blacksmiths, cooks, and those following similar occupations that ulcerations are prone to occur. A loaded condition of the portal circulation and constipated bowels also favor varicosities and the occurrence of ulceration. On account of the chronic, congested condition of the leg, some slight traumatism that in the normal state would produce hardly appreciable damage will be followed by a breaking down of the tissues and an ulcer.

DIAGNOSIS. It is most important to diagnose a varicose ulcer from one due to syphilis, as they require different treatment, and have a different prognosis. The *syphilitic ulcer* is usually located upon the upper half of the leg, and toward its posterior surface, or about the knee. It has an infiltrated border, but by no means as broad a one as the varicose ulcer. It lacks the marked inflammatory symptoms of the varicose ulcer, and is "punched-out looking" with perpendicular ridges. It is round, or, if formed by the coalition of several softened tubercles, it will have a scalloped edge, indicating its origin from several distinct lesions. As a rule, it is quite painless, and there are several ulcers on one leg, the other being free.

TREATMENT. If we can confine our patient absolutely to bed, and keep the leg snugly and evenly bandaged, the ulcers will heal under simple dressings. This we cannot do with most of our cases. Bandaging the leg from the toes to the knee is an essential in their successful management, an ordinary roller-bandage being used as long as any greasy applications are made. In ulcers connected with varicose veins, after acute symptoms have subsided, bandaging from the toes to the knee with a rubber bandage is excellent. So too in all ulcers is the continuous bath with warm water, or by means of cloths wrung out of hot water, frequently renewed and covered with oiled silk.

One of the oldest and best treatments for ulcers is to touch them daily with balsam of Peru and cover them with oxide of zinc ointment, or, better, with Lassar's paste. Dry dressings for the ulcer are preferable to greasy applications, and for this we may use iodoform, iodol, aristol, subnitrate or subiodide of bismuth, or dermatol, or any of the later powders. If there is any eczema or dermatitis about the ulcer, it is requisite to cover the powder and the whole patch with some mild or stimulating ointment according to the state of the skin. In this case the ulcer must be dressed once or twice a day. If there is not much dermatitis, we can dispense with the ointment, and dress the leg antiseptically and leave it for several days. Applications of nitrate of silver may be

used to stimulate an atonic ulcer or to smooth down exuberant granulations. Strapping with adhesive plaster is another excellent means of treating ulcers upon not very much inflamed bases. Skin-grafting, according to Thiersch's method, is the most prompt and sometimes the only way to cause large ulcers to heal. For further surgical treatment of ulcers text-books on surgery must be consulted.

Ulcer, Oriental. See Aleppo boil.

Ulcer, Perforating, of Foot. See Perforating ulcer of foot.

Ulcer, Tropical Phagedenic. This is an ulcer secondary to a lesion of the skin that occurs in the tropics, and is marked by rapid extension and gangrenous destruction of tissues. It may be mild or malignant in its course. The latter eats deeply, involving even the bones.

Ulcus Rodens. See Epithelioma.

Ulcus Grave. See Fungous foot of India.

Ulerythema. This is the name proposed by Unna for those diseases in which there is a more or less persistent erythema upon which follows cicatrization by a process of absorption of inflammatory infiltration, and without ulceration. Under this heading comes lupus erythematosus. *Ulerythema sycosiforme*[1] and *ulerythema ophyrogenes*[2] are two other varieties of this form of disease. They bear a resemblance to the "folliculitis decalvans" of the French. They both affect hairy regions, the first having a predilection for the beard, and the second for the eyebrows. In their course they present symptoms somewhat like sycosis, but differ from that disease in causing permanent bald patches, and the destruction of the skin so as to form cicatrices.

Ulerythema acneiforme is the name given by Unna[3] to a purely local, probably parasitic, disease of the skin which is limited to the neighborhood of individual hair

[1] Monatshefte f. prakt. Dermat., 1889, ix., No. 3.
[2] Ibid., No. 5.
[3] Internat. Atlas of Rare Skin Diseases, No. 1.

follicles. It begins as an inflammatory erythema, which, after persisting for some time, leads either to the formation of a well-marked cornification of the cuticle and comedones, or to cicatricial atrophy.

It differs from *acne* in beginning on the middle of the cheek and margin of the auricle; in extending to the hairy scalp; in being primarily an inflammatory erythema; in an absence of suppuration, and in atrophy occurring without suppuration. It differs from *acne necrotica* in complete absence of necrosis, suppuration, and ulceration; in prominence of comedones; and in having no resemblance to variola in its scar.

Uridrosis. Synonym: Sudor urinosis. By this is meant the excretion by the sweat pores of sweat loaded with the constituents of the urine, specially urea. The sweat then often has a urinary odor, and deposits crystals of urates upon the skin. It is always a complication of some grave general disease.

Urticaria. Synonyms: Cnidosis; (Fr.) Urticaire; (Ger.) Nesselsuch, Nesselausehlag, Porcellanfriesel; (Eng.) Nettle-rash, Hives.

An acute or chronic disease of the skin characterized by the appearance of wheals. This usually trivial affection, so common as to be a matter of every-day occurrence, at times may assume grave symptoms, or entirely nonplus us by its persistency. It may run an acute or chronic course.

Symptoms. The vast majority of cases run an acute course. The characteristic feature of the disease is the appearance of wheals—that is, firm, flat, circumscribed elevations of the skin which are at first pink, and then white. They may remain pink. They may be round, oval, annular, or elongated, and are always surrounded by a red areola. They vary in size, sometimes being no larger than the head of a pin, and sometimes of the diameter of an inch. They show no tendency to group, but are irregularly disseminated over the whole body. Though they are not symmetrical in distribution, both sides of the body are affected at the same time, and they show some preference

for the extensor surfaces of the arms and legs. They itch, burn, and tingle, and are always scratched. They are ephemeral, each lesion lasting but a short time—from a few minutes to a day. Exceptionally some wheals will last several days. New lesions crop out as old lesions fade, and thus the eruption is continued. The mucous membranes are often affected at the same time with the skin; and if the pharynx is attacked there may be suffocative symptoms. The duration of the disease as commonly met with is but a few days, and not infrequently the wheals may be entirely absent during the day, to break out again at night. Very often when the patient is seen by the physician, he can find nothing but scratched papules. But the patient will tell him that when he is undressing, or is warm in bed, the itching becomes unbearable, and lumps looking like mosquito-bites break out upon him. The skin of a patient with urticaria is very irritable, so that a sharp tap upon it or drawing the nail across it will produce a wheal.

The outbreak of the disease may be sudden without constitutional disturbance, or there may be some burning and tingling of the skin before its appearance. Or there may be some febrile movement, and some evident disturbance of the digestion, such as vomiting or dyspeptic symptoms. When the disease is cured the lesions disappear without desquamation, and leave no trace. Such is the acute form.

Chronic urticaria differs from the acute form mainly in its duration. Instead of recovery taking place in a few days or weeks, its course is one of months and years. Sometimes the outbreaks of the eruption show marked periodicity, coming out at stated intervals after pauses of complete immunity. The eruption is generally not so extensive in the chronic as in the acute form. If the itching has been very severe and the scratching proportionally excessive, the skin may become pigmented, as in other chronic pruriginous diseases.

The wheals assume different appearances in different cases, and different adjectives are used to express the varying pictures. It is not necessary to burden the mind with these, though they are convenient for descriptive

purposes. Thus we have *urticaria tuberosa* seu *gigans*, where the lesions are unusually large; *urticaria bullosa*, where the wheals are surmounted by bullæ; *urticaria hæmorrhagica*, where hemorrhage into the wheals occurs; *urticaria œdematosa*, probably the same as acute circumscribed œdema or acute angeioneurotic œdema, where the wheal occurs in locations in which the subcutaneous tissues are lax, as about the eye, nearly closing it, or on the tongue, causing it to swell enormously and threaten suffocation; *urticaria papulosa*, or lichen urticatus, where the wheals are small, a form common about the buttocks of children.

Urticaria factitia is the name used to express the fact that, on account of the irritability of the skin, a wheal may readily be excited by local irritation. *Urticaria perstans* simply refers to the persistent character of the single lesion. *Urticaria maculosa* is the name proposed by Fournier for that form in which the wheal remains red.

Etiology. The causes of the disease are more numerous than the forms it may assume. Most of the acute and many of the chronic cases are dependent upon irritating ingesta, such as shell-fish, strawberries, cheese, pickles, mushrooms, pork, sausages, even mutton in some, and almost anything in other people, it being largely a matter of idiosyncrasy; medicinal substances, such as quinine, cubebs, copaiba, salicylic acid, opium, and other drugs. The rupture of hydatid cysts has been followed by urticaria. Dyspepsia in its various forms, and constipation, are common factors, especially in chronic urticaria, as are intestinal worms in children. So also at times may be disorders of the liver, uterus, and ovaries. Some very severe cases occur during pregnancy. Gout, rheumatism, malaria, and functional or organic diseases of the nervous system will be found at the bottom of many cases of chronic urticaria.

Not only do we have internal causes producing the disease, but also external causes, such as contact with the jelly-fish; crawling of caterpillars; the action of cold, or sudden changes of temperature; the galvanic current; and bites of insects. Urticaria is a common accompaniment of scabies and pediculosis.

PATHOLOGY. Urticaria is due to a vasomotor disturbance. At first there occurs a spasmodic contraction of the vessels of a circumscribed area of the skin, which is followed by paralytic dilatation of the vessels and retardation of the circulation. Serous exudation ensues, forming the wheal, which at first is pink, and then becomes white, on account of the pressure of the fluid forcing out the blood from the central parts of the wheal. When the paresis ceases, the serous exudation is absorbed and the part returns to its normal condition. T. C. Gilchrist[1] does not believe in the vasomotor theory of the disease. He thinks that it is an inflammation of the skin due to the escape of some toxin from the blood into the derma.

DIAGNOSIS. The occurrence of wheals is pathognomonic of urticaria, as they occur in no other disease. When they are present there is no difficulty in diagnosis. When they are not present and we find only scratch-marks we have to decide whether we have to do with urticaria or eczema, scabies, pediculosis, or dermatitis herpetiformis. *Eczema* differs from urticaria in the tendency its lesions have to run together and form patches. It never could be so generally distributed without presenting some characteristic patches. *Scabies* shows scratch-marks on the hands and feet, between the fingers and toes, in the axillæ, about the umbilicus, and on the breasts of the female and the penis of the male. The cuniculi may be found in most cases. *Pediculosis* shows long parallel scratch-marks over the back, between the shoulders, along the outside and inside of the limbs where the seams of the clothing come, and about the waist. *Dermatitis herpetiformis* presents grouped lesions, which usually are vesicles, but may be papules. *Erythema* of papular or tubercular variety may resemble urticaria, but it is a markedly symmetrical disease, and burns rather than itches.

TREATMENT. In acute urticaria the administration of a prompt cathartic or saline laxative will usually cure the disease if due to some irritating ingesta. Emetics may be useful, if we see the case before stomachic digestion is ended, but in most cases we are called in when it is too late

[1] Journ. Amer. Med. Assoc., 1896, xxvii., 1222.

for them to be of service. Saline laxatives, mineral acids, rhubarb and soda, salol, resorcin, or other intestinal disinfectants are of service in the more chronic cases. Of course, if the eruption is due to the ingestion of drugs, they must be stopped.

In chronic cases, besides medicinal treatment we must regulate the diet, studying each case by itself. It is often well to put the patient on a strictly milk diet for a few days, and then add other articles with care. Alcoholics in all forms, and especially beer or other malt liquors, should be prohibited. If the gouty or rheumatic diathesis is at the foundation of the trouble, it must be combated. If the outbreak shows marked periodicity, sulphate of quinine may do good. Salicylate of soda sometimes does good service even when there is no evident rheumatic tendency. In fact, we must endeavor in every way to get our patient into a normal state of health. The most difficult class of cases are those in which a neurosis alone seems to be the cause. Then belladonna, atropia, arsenic, the bromides, antipyrine, phenacetine, and galvanism may be tried. Pilocarpine, wine of antimony, colchicum, ergot, are also commended. In very obstinate cases the patient should be sent away from home and relieved from all business cares.

Local treatment is of great service in allaying the itching, but it will not cure the disease. The parts may be sponged with alkaline lotions, such as a teaspoonful of baking-soda to a hand-basinful of water. Sometimes more relief is obtained by an acid solution, such as vinegar, pure or with water. Carbolic acid in vaseline, or alcohol and water, is sometimes very efficacious. In vaseline, ten per cent. strength is sufficient; in lotion-form we may use, to the adult skin, one to two drachms to the ounce, directing the patient to dab and not rub it on the skin. Hardaway prefers using the acid in a spray, two to four drachms to the pint, with one ounce of glycerin. To each atomizerful ten drops of oil of peppermint may be added to increase its antipruritic qualities. Menthol, one to ten per cent. in alcohol or almond oil, is said to be efficacious. Crocker speaks highly of liquor carbonis detergens,

℥j to ℥iv; terebene, ʒiv to ℥iv; and equal parts of sanitas and water. Salicylic acid, twenty grains to the ounce of castor oil, is good, but disagreeable. Camphor and chloral hydrate, each from half to one drachm, rubbed together and added to one ounce of starch or ungt. simplex, is another good antipruritic. Chloroform dabbed or sprayed on renders prompt relief. Baths are sometimes of use. Having the patient take a warm bath containing either two to six pounds of bran, or a quarter to half a pound of bicarbonate of soda, or an ounce of nitromuriatic acid, just before going to bed; then drying the skin by wrapping in a warm sheet and patting the skin dry; then smearing the skin with a film of vaseline and dredging over this cornstarch powder, will often give him a good night's rest.

PROGNOSIS. The vast majority of cases of urticaria recover in a few hours or days. The chronic cases often are most obstinate, but unless some severe nerve lesion is at the bottom of the case, they can be cured by patient and persevering effort.

Urticaria Pigmentosa. Synonym: Xanthelasmoidea.

SYMPTOMS. This is not an ordinary urticaria, that, on account of its chronic course and the scratching to which it has been subjected, leaves more or less pigmentation of the skin. Such a condition of things is not infrequently seen. Urticaria pigmentosa begins within the first six months of life by an eruption of wheals or tubercles, which at first are about the size of a split pea, and of a brownish or yellowish-red color, with a pink areola. Later they may increase in size, or several may coalesce to form a large one, and assume a yellow or buff color. These wheals appear in crops, and run a very chronic course, each one persisting for weeks or months. They then shrink, become softened, and disappear, leaving brownish pigmentation. As the course is chronic, we will find on the patient wheals or tubercles of red or yellow color, of various sizes, some hard and tense, some soft and wrinkled, and brown stains of the skin. Ordinary urticarial evanescent wheals will sometimes be found, and rubbing of the

apparently stationary tubercles will cause some of them to enlarge. The wheals are most often located on the trunk and neck; then on the limbs, face, and head; but they may appear on any part of the body surface as well as on the mucous membranes of the mouth and pharynx. Itching may or may not be present. After a number of years the wheals will no longer come out, and recovery is generally complete at about the age of puberty, though the disease may last much longer than that. Morrow[1] has reported one case of over twenty years' duration. The majority of the cases, according to Crocker, occur in boys. We know no cause for the disease, and thus far treatment has been in vain.

Vaccinal Eruptions. The eruptions that accompany or follow vaccination may be local, starting from the point of inoculation; or general, and due to the absorption of the virus, which in some subjects acts as do medicinal substances in other people. The majority of them are due not to any bad quality of the virus, but either to some accidental infection or to idiosyncrasy. Sometimes an ulcer will form at the site of the vaccination; or starting from this point we may have a dermatitis, cellulitis, lymphangitis, erysipelas, abscess, or furuncle. At times exuberant granulations, or what is called an *infective granuloma*, may develop upon the seat of the vaccination. An outbreak of impetigo contagiosa may originate from inoculation, the pus of the sore becoming transferred to other parts by the finger-nails; or an eczema or psoriasis may be set up by the irritation of the sore, just as they may follow other affections of the skin.

General eruptions usually appear, according to Hardaway, after the ninth or tenth day of vaccinia, and assume an erythematous, papular, or papulo-vesicular character. The *roseola vaccina* of Hebra is an erythematous eruption of macular character, commencing usually upon the arms, and sometimes spreading over the whole body. It is accompanied in some cases with slight rise of temperature for a few hours. It disappears and leaves no trace.

[1] Journ. Cutan. and Gen.-Urin. Dis., 1895, viii., 445.

Variola. Stage of Maturation.

By the courtesy of Dr. S. Dana Hubbard.

Variola. Stage of Umbilication.

By the courtesy of Dr. S. Dana Hubbard.

We may also encounter erythema multiforme and urticaria complicating vaccination. It is possible that a bullous eruption may occur, but this is very rare. Syphilis also may be inoculated in arm-to-arm vaccination. Gangrene may occur in the sore and other accidents. All of these are rare.

Varicella, or **Chicken-pox**, is an eruptive fever of mild grade, with an incubative period of two weeks. It is characterized by an outbreak of a greater or less number of red papules and clear vesicles, of pinhead to pea size, and varying shape, that come out in crops. A long vesicle is very characteristic of this eruption, as is the location of the vesicle or pustule to one side of the areola. The vesicle can be easily ruptured. There is usually only slight constitutional disturbance. The mucous membranes may be involved.

Varicella Gangrænosa. See Dermatitis gangrænosa infantum.

Variola, or **Smallpox**, is an acute contagious fever with an incubative period of about two weeks. It is characterized by very severe prodromal symptoms, such as headache and intense pain in the back and legs, and the appearance, usually on the third day, of an eruption of minute red spots that soon change into small, round, hard, shotty papules. The eruption is first seen on the face about the forehead and mouth and on the neck and wrists. In about twenty-four hours after its first appearance vesicles form upon the papules, and attain their full development by about their fifth day. They then are umbilicated, are located upon a hard base, and have a well-marked areola. Now they change into pustules, and a well-marked secondary fever attends the change. After about four or five days the pustules dry up into crusts, and afterward these fall, leaving pitted cicatrices in many places. The mucous membranes are commonly involved. In *varioloid*, modified smallpox, the constitutional symptoms as well as the eruption are of much milder grade.

Diagnosis. Variola bears a resemblance to the pus-

tular syphilide; for the differential diagnosis, see the "pustular syphilide." Acne and pustular eczema both have lesions resembling those of variola, but are limited to certain regions, and are not general eruptions. Varicella and papular erythema have been mistaken for variola. In its earlier stages the diagnosis of variola is very difficult. In pronounced cases, on the other hand, the diagnosis is easy.

Varus. See Acne.

Végétation dermique.
Vegetations.
Venereal Wart.
} See Verruca.

Verbrennung. See Dermatitis ambustionis.

Verruca. Synonyms: (Fr.) Verrue; (Ger.) Warze; Wart.

These exceedingly common papillary outgrowths assume various appearances, to which descriptive names have been given. Thus we have *verruca vulgaris*, or the wart so often seen on the hands of children and young people. These vary in size from that of a hemp-seed to that of a split pea, or larger where two or more become aggregated. They are sessile, hard, conical, with flattened tops. They may be smooth, or uneven, showing their papillary formation. They may be of the color of the skin, or some shade of yellow, brown, black, or green. There may be a number of them, and they may be isolated or aggregated. They may occur elsewhere than on the hands. *Verruca digitata* is a wart in which the papillæ are separated distinctly from each other. These occur in groups, and are often seen on the scalp. *Verruca filiformis* is a wart in which the papillæ are not only distinct, but fine, almost thread-like. Each papillary outgrowth stands by itself. These are soft to the touch, and occur on the face, eyelids, and neck. *Verruca plana* is a flat wart, but slightly elevated, and varying in size from that of a pinhead to a half-inch in diameter. These sometimes occur in large numbers. In young people they occur upon the

face and backs of the hands, and may or may not be pigmented. In old people they occur on the trunk and arms and are pigmented, and are called *verruca senilis* or seborrhœal warts. *Verruca acuminata*, also called *condyloma acuminata, végétation dermique, spitzen warzen*, and *venereal or moist wart*, is met with in the anal and genital regions of both sexes, as also in the axillæ, under the hanging breasts, in the umbilicus, and between the toes. These are vascular, sessile or pedunculated, and composed of a great number of closely aggregated projections of various shapes. On exposed situations they are dry and of the color of the skin; while in locations that are moist—that is, between the skin-folds—they are covered with a whitish puriform secretion, and, unless kept very clean, they emit an offensive odor. They sometimes attain to an immense size.

ETIOLOGY. We do not know the cause of warts. They are regarded by some as contagious, and parasites have been isolated and declared to be the morbific agents. They have been produced by inoculation. They occur more frequently in the young than in the old, and may be congenital. Venereal warts are traceable to irritating discharges, but not by any means always to a gonorrhœa. They are undoubtedly contagious.

PATHOLOGY. Warts concern the rete mostly, being markedly downward and upward growths of its cells. The papillæ beneath the wart are flattened. The corneous layer of the skin is hypertrophied, but less compact than normal.

TREATMENT. The treatment of most all warts is prompt and efficient by means of the curette, scraping them off while the skin is slightly stretched. If there is any doubt about their returning, their bases may be touched with iodine or nitric acid. Generally simple scraping is sufficient. The wart often is thus turned out of the skin entire, like a pea from a pod. No scar is left, because the corium is not wounded. Electrolysis may be used. The digitate and filiform warts may be snipped off with the scissors. If operative interference is refused, the warts may be removed by painting with tincture of iodine; or a saturated solution of salicylic acid; or a twenty per cent. solution

of resorcin; tincture of thuja; or nitric or glacial acetic acid. G. W. Fitz[1] says that painting them daily with a ten per cent. solution of chrysarobin in traumaticin, after rubbing them down with fine sandpaper, will remove them in a week or so. In the country children's warts are removable in some cases by the application of the juice of the common milk-weed. Venereal warts may be removed by keeping them clean and dry, and painting them with liq. plumbi subacetatis, or a solution of the perchloride or persulphate of iron; or dusting them with salicylic acid and starch, or with boric acid. Chromic acid is a powerful caustic. Caustic potash is not a safe agent to use, unless care is had to limit its action by a ring of wax about the wart. The galvano-cautery may also be employed.

It is said that warts may be removed by internal treatment. Sulphate of magnesia, two or three grains to a child and half a drachm to an adult, three times a day, is one remedy. Besnier has tried this method in a number of cases with absolute unsuccess. Tincture of thuja occidentalis is said to be efficacious. Crocker thinks he has seen cures effected with full doses of nitromuriatic acid, while others advocate arsenic.

Warts very often disappear of themselves, and no one has ever seen them fall.

Verruca Necrogenica. See Tuberculosis verrucosa cutis.

Verrue. See Verruca.

Verrue Telangiectasique. See Angiokeratoma.

Verruga, Endemic. See Yaws.

Verruga Peruana. This disease is said to occur in the narrow, hot valleys of Peru. It begins as a fever resembling malaria, accompanied by anæmia, pains in the joints, neuralgia, and swelling of the liver and spleen. The patient may die in this stage. If he survives, the warts follow the fever. They may appear suddenly without the prodromal fever. They may be miliary in size, and rosy and translucent; or larger, forming dull horny papules; or nodular in size, when they may be complicated with furun-

[1] Boston Med. and Surg. Journ., 1899, cxl., No. 26.

cles. They are scattered over the body. They may undergo spontaneous involution. A special bacillus is supposed to be the cause of the disease. They are to be scraped off with a curette.

Vibices. See Purpura.

Vitiligo. See Leucoderma.

Vitiligo Capitis. See Alopecia areata.

Vitiligoidea. See Leucoderma.

Wart.
Warze. } See Verruca.

Warzenkrebs. See Carcinoma.

Warzenmal. See Nævus verrucosus.

Washleather Skin is that condition of the skin in which certain metals, specially silver, mark it with a black line. It occurs, as a rule, in patients suffering from diseases which directly or indirectly affect either the trophic or the sensory nerves, such as renal disease, phthisis, erysipelas, and hemiplegia. It sometimes precedes the occurrence of bedsores.

Weichselzopf. See Plica.

Wen. See Sebaceous cyst.

Whelk. See Acne.

Xanthelasma. See Xanthoma.

Xanthoma. Synonyms: Xanthelasma; Vitiligoidea; Molluscum cholésterique; Fibroma lipomatodes.

A peculiar disease of the skin characterized by the appearance of discrete patches, or tubercles, of chamois or lemon-yellow color.

Symptoms. Xanthoma may assume one of two forms: *Xanthoma planum*, or *Xanthoma tuberosum* or *tuberculatum*. In the former we meet with flat, chamois-leather-like, or lemon-yellow plates that are either slightly raised above the level of the skin, or not at all raised. They vary in size from an eighth of an inch to an inch in their long

diameter, feel soft and smooth to the touch, and when pinched between the fingers no infiltration of the skin is perceptible. They are irregular in shape, tending to form elongated figures. When in patches, they feel almost velvety, and when examined with a lens they are seen to consist of an aggregation of small granules, many of which have a central pinkish punctum.

Xanthoma tuberosum exhibits lesions of the same color as does the plain variety, or they may be reddish yellow, but they are raised above the skin and may attain to a large size. They are soft, smooth, round or oval, with telangiectases over them when small. When large, they are firmer and more irregular in shape, being made up by aggregation of a number of smaller tubercles. *Xanthoma multiplex* is the name applied to cases in which both varieties are present. In all forms, unless there is jaundice, the skin between and about the lesions is normal in color. Most cases give rise to no subjective symptoms, but there may be some itching or burning. If the disease occur upon the palms or knees, it may cause discomfort or even pain on kneeling or handling objects.

The favorite site of xanthoma planum is in the upper eyelid, where they are not infrequently seen. There they commence at the inner canthus, most often of the left eye, and spread in a semicircle about the eye, while shortly afterward a similar growth begins on the right upper eyelid. Next in point of frequency to the eyelids, they occur upon the flexures and mucous membranes. Xanthoma tuberosum is most frequently seen upon the knees, elbows, knuckles, and other points of pressure, the trunk being not so much affected. Symmetry is generally observed. Xanthoma multiplex is often very widely distributed. Sometimes the lesions run in streaks, or, as in Hardaway's case,[1] are arranged like a zoster. The following case reported by me[2] is one of the most extensive on record:

Michael M., aged five years, was admitted to my service at the Randall's Island Hospital in May, 1890. From the child's sister I have been able to gather the following

[1] St. Louis Courier of Med., October, 1884.
[2] Journ. Cutan. and Gen.-Urin. Dis., 1890, viii., 241.

imperfect history: The eruption appeared when the child was three months old, without any antecedent disease, and came out all over the body at the same time. It is thought that no new lesions have appeared since then; that there has been change in the size of the lesions, and that some of they have disappeared. The boy is said to have always been well, to have played about like other boys, and never to have been jaundiced.

Examination of the boy reveals a very extraordinary condition of affairs: the whole body of the boy is occupied by a disseminated efflorescence, no part being spared except the hands, feet, and scalp. The lesions are about the size of a split pea or a little smaller, are soft to the touch, and have a central depression. Upon the face, trunk, shoulders, and lower part of the legs they are discrete, and scattered about without any particular arrangement. Upon the extremities the lesions are crowded into patches of various sizes and shapes, with normal skin between them. Even in the patches the lesions are distinct. They touch each other but do not coalesce. The distribution of the lesions and of the patches is quite symmetrical. The color varies from a lemon yellow in the discrete lesions on the shoulders to an orange yellow in the patches. About the joints the color is reddish brown.

In the right eyelid are well-marked, typical xanthomatous patches of chamois-leather color. The lower lid is occupied by one continuous patch running from the inner to the outer canthus. On the upper lid there is a small tumor. The left lid is but very slightly affected. Upon the back of the neck and the upper part of the back are a number of light-brown pigmentary spots, which his sister says are the remains of some lesions that have disappeared. Scattered about the trunk are a number of depressed scars, apparently the remains of a recent varicella.

The boy is very thin, of blonde type, and the skin is pale. Apart from this there is nothing abnormal. His appetite is good, his digestion is in fine condition, and his urine contains neither albumin nor sugar. Upon the left buttock there is one vascular nævus.

Under the name of *Pseudo-xanthom elastique* E. Bodin[1] has described an eruption of pinhead-sized, oval or round, pale-yellow lesions that occurred in symmetrical patches, about which were scattered single lesions. The surface of the patches was smooth or slightly granular. They occurred on the lower part of the abdomen, clavicular region, anterior wall of axillæ, inside of arm, forearm, and thighs.

The skin in xanthoma is not alone affected. Xanthomatous bodies are found in the liver, mucous membranes, and tendons. The disease is progressive for a time, and then may remain stationary for years, or may undergo spontaneous resolution.

ETIOLOGY. Xanthoma occurs much more frequently in adults than in children, and that form that occurs in the eyelids is much more common in women than in men. Several cases may be seen in the same family, and the disease is sometimes hereditary. But we really do not know as yet what is the cause of the disease, though various theories have been advanced. Hepatic diseases; diabetes; diathetic conditions of various kinds; migraine; embryonic cells left in the skin—each have been found in connection with one or many cases. Hardaway may not be wrong in his idea that it is a diathetic disease, and that when it occurs with jaundice it is because the same tubercles have been deposited in the liver as in the skin, and the jaundice is secondary to them.

PATHOLOGY. It is a connective-tissue new growth containing an abundance of fat. Between the connective-tissue bundles the so-called "xanthoma cells" are found. The color of the lesions is due to fat-globules. (Heitzmann.) S. Pollitzer[2] believes that xanthoma palpebrarum is due to the degeneration of embryonically misplaced muscle fibers.

DIAGNOSIS. The diagnosis of this unique disease is made by the occurrence of chamois-leather-colored soft plates or tubercles, such as occur in no other disease. *Milium* may bear some slight resemblance to xanthoma,

[1] Ann. de derm. et de syph., 1900, i., 1073.
[2] New York Med. Journ., 1899, lxx., 73.

but it is hard and firm, not soft and velvety, and white, not yellow. It is easily squeezed out after a prick through the skin over it, an impossibility in xanthoma.

TREATMENT. In the way of treatment we have no sure resource save the knife and electrolysis. The latter is preferable. In so general a case as mine neither plan would be applicable. Besnier[1] reports good results from the administration of phosphorus in cod-liver oil, giving one milligramme per day, and increasing the dose each day by a quarter of a milligramme until three milligrammes are taken. After fifteen days this is stopped and turpentine is given. Stern[2] tried this plan without success, but succeeded in removing patches of the disease from the eyelids by the use of a ten per cent. solution of corrosive sublimate in collodion. Shepherd, of Montreal, saw one case recover after an operation for biliary calculi; and McGuire removed one with monochloracetic acid.

Xanthoma Diabeticorum. Besides the xanthoma just described, there is another form which is regarded as a distinct affection, and called Xanthoma diabeticorum.

SYMPTOMS. It is an exceedingly rare disease, which differs from ordinary xanthoma in its more sudden development; in disappearing sooner or later, perhaps to recur; in the hardness of its lesions, which are never macular; in the frequent absence of a yellow color; in the presence of a certain amount of inflammation; in the absence of jaundice and presence of diabetes mellitus; in its more pruriginous character; in avoiding the eyelids; and in having its lesions about the mouths of the hair follicles. In fact, it resembles ordinary xanthoma mostly in its location upon the elbows, knees, and other points of pressure, and in the general configuration of the lesions. In it we have conical papules with yellowish apices and pinkish-red bases. The lesions often disappear when the diabetes is relieved. The treatment should be directed to the diabetes, which is at the foundation of the disease, and to the allaying of the itching.

[1] Journ. de Méd. et de Chir., April, 1866.
[2] Berlin. klin. Wochenschr., 1889, xxv., 393.

Xeroderma. See Ichthyosis.

Xeroderma Pigmentosum. See Atrophoderma pigmentosum.

Yaws.[1] Synonyms: Framboesia; Pian; Parangi; Verruga; Granuloma tropicum.

This is a disease that occurs only in tropical countries. The stage of incubation lasts two to eight weeks and is without special symptoms. The stage of invasion, with more or less well-marked fever and rheumatic pain, which abate before the eruption appears, lasts one or two weeks. The eruption is preceded by enlargement and tenderness of the lymphatic glands, and consists of pinhead- to lentil-sized, slightly elevated papules on a broad base. The papules enlarge; the epidermis splits and curls off from their centers, and exposes a yellowish point which develops into a flat, moist, red or pink tumor, looking not unlike a raspberry. These tumors range in size from that of a split pea to that of a nut, are round or oval, discrete or coalesced into large irregular masses. The surface of the tumor is covered with a thin, yellowish, foul-smelling discharge, that dries into a crust, which may ultimately assume a rupia-form. In the mouth and in moist situations no crusts form, and the tumors will resemble mucous patches. They reach their full development in from two to four weeks, remain stationary for months, and then dry up and fall off, leaving a stain on the skin that eventually disappears. They may break down and ulcerate, involving both the adjacent soft parts and the bones. The tumors are not tender. The disease tends to recovery, but is subject to relapses. It is contagious, and one attack is protective to a certain extent. Death occurs in bad cases. There is a probability that the disease is syphilis modified by climatic and racial influences. It is supposed to be due to a specific micrococcus.

TREATMENT. The treatment is the same as in syphilis—that is, by mercury and iodide of potassium. Locally, disinfectant and mercurial applications should be used.

Zaraath. See Lepra.

[1] This account is condensed from Crocker.

Zona. See Zoster.

Zoster. Synonyms: Zona; Herpes zoster; Ignis sacer; (Ger.) Feuergürtel, Gürtelkrankheit; Shingles.

An acute disease of the skin characterized by a unilateral eruption of groups of vesicles upon reddened bases scattered along the course of certain nerves.

SYMPTOMS. Zoster, like psoriasis, presents such marked lesions that once seen it is readily recognized when seen again. It occurs in the form of groups of vesicles seated upon red bases, and arranged along the course of nerves upon which there are ganglia. (Fig. 80.) The vesicles are at first filled with serum that afterward may become cloudy. They do not tend to break down of themselves, but are frequently ruptured by accident. The size of the groups varies greatly. There may be but a few vesicles or a large number of them closely crowded together. Sometimes a group is no larger than a three-cent piece, and sometimes it is several inches in its longest diameter. Sometimes the vesicles may run together and form blebs. The shape of the groups is always irregular. There may be but two or three groups or a score of them. In nearly all cases the disease is unilateral, though it is not uncommon for one or two groups to be found close to the middle line, on the side opposite to the site of the disease, and cases of double zoster occur, though very rarely and never on the same level. All the groups do not come out at once, but, as it were, by a series of outbreaks, the earliest ones to appear usually being those nearest the point of exit of the nerve. The eruption is usually at its height in a week, the vesicles drying up, forming a crust and falling off, leaving a red mark that soon fades. The whole duration of the disease is from ten days to three or four weeks.

In many, if not most, cases the patient experiences neuralgic pain in the nerve along whose course the eruption is about to appear. This is sometimes wanting, and generally lessens or disappears when the eruption appears. Sometimes the pain is severe during the duration of the eruption, and after it is gone. Tender points may often be found over the points of exit of the nerves, like those

found in neuralgia. In some patients there will be fever before the outbreak of the vesicles or the successive appearance of new groups. The vesicular stage is preceded by an erythemato-papular stage. Very rarely some of the groups may abort at this stage. Exceptionally, zoster may occur on both sides of the body. In nearly all cases the disease does not recur. Exceptionally a patient may have several attacks of the disease.

Most cases of zoster occur upon the trunk, and, it is said, especially on the right side. It also occurs upon the face, on branches of the fifth nerve, when it may involve the eye and produce blindness by destructive ulceration.

FIG. 80.

Zoster of arm.

The neck may be affected, and with it the arm. The leg, too, may suffer. Generally the eruption does not reach further down than the elbow and knee, though it may occupy the forearm and hand, leg and foot. In rare instances the tongue and pharynx may be affected. Various names are used to designate the location of the eruption, such as zoster frontalis, ophthalmicus, cervicalis, intercostalis, genito-cruralis, and the like.

In rare cases hemorrhage may occur into the vesicles, or they may be purulent from the start, or they may ulcerate, or become gangrenous. The neuralgia may continue in old or debilitated subjects in so severe a manner as to threaten the exhaustion of the patient from pain and

loss of sleep. Or pruritus, hyperæsthesia, or anæsthesia may be left for some time after the disappearance of the eruption. Or paralysis of motion may follow the attack, as well as atrophy of muscles. Scars will follow the disease if ulceration has occurred.

ETIOLOGY. Zoster occurs more often in children than in adults. Sex seems to have little influence. It follows upon injuries to nerves in some cases, and has been associated with caries of the ribs. It has been known to occur while the patient was taking arsenic. It occurs frequently in the damp, cold weather of the spring and autumn, so much so as to give rise to epidemics. Indeed, some regard the disease as infectious on account of the epidemic character it sometimes has. Some cases seem to arise from peripheral irritation of cutaneous nerves. A descending peripheral neuritis of the spinal ganglion is regarded by Crocker as the condition most frequently associated with the disease. In a great number of cases disease of the ganglia upon the posterior roots of the spinal nerves has been found post mortem. When the fifth nerve is affected, it is the Gasserian ganglion that is diseased. Zoster may arise from injury, as a wound of a nerve-trunk, and then we may have an ascending zoster, the first group being nearest the point of injury.

DIAGNOSIS. Zoster in most cases is readily recognizable. It differs from *eczema* in having larger vesicles that do not tend to rupture; in its patchy character, the patches being located along certain nerve-trunks; in the neuralgia that accompanies it; and in the definite course that it runs. *Herpes facialis* or *progenitalis* sometimes resembles zoster quite closely, but in them there will often be a history of previous attacks; they will not occur so markedly as groups of vesicles upon one side alone; and they will not be preceded by the same amount of neuralgia. By some authorities herpes and zoster are considered to be the same disease.

TREATMENT. The most important part of the treatment of zoster is to prevent the breaking of the vesicles, and the possible ulceration that would follow and leave scars. To this end we should avoid ointments and use

dusting powders, such as oxide of zinc, bismuth, starch, guaiacol, five per cent. with starch powder, or, what is better, we should paint the vesicles with flexible collodion with or without morphine, which sometimes seems to abort the formation of vesicles. It is also advisable to cover the eruption with a soft linen bandage to prevent rubbing. If the vesicles have become broken and ulceration has ensued, then we have to treat the ulcers on surgical principles.

To relieve the pain of zoster the galvanic current gives the best results, one sponge electrode being placed over the spine, and a steel roller electrode attached to the other pole and passed *around* the groups for ten or fifteen minutes once or twice a day. A current-strength of two or three milliampères may be used, and, if it can be done, the last application should be made just before going to bed. Other means are hypodermics of morphine; blistering over the root of the nerve; guaiacol as mentioned above, and the use of the menthol cone or oil of peppermint. Phosphide of zinc, one-third of a grain every three hours, is thought by some to relieve the pain and limit the eruption. For the persistent neuralgia that at times follows these cases, arsenic, or strychnine, iron, quinine, cod-liver oil, and a good nutritious diet are necessary. Opium may have to be given to allay pain and procure sleep.

Prognosis. Most cases of zoster run a favorable course and get well of themselves. It is only in old or debilitated people that we need fear any serious results. There is always the possibility of the occurrence of ulceration and gangrene, though it is not to be expected in the vast majority of cases. The popular opinion that if zoster occurs on both sides at once and forms a girdle the patient will die, has no foundation in fact, as such an occurrence is unknown.

APPENDIX.

THE following formulæ are given as guides in the preparation of prescriptions for the treatment of skin diseases. Many, if not all of them, have been well tried and their value proved:

A. BATHS.

SIMPLE WATER BATHS:

Cold	40°– 65° F.
Cool	65°– 75° F.
Tepid	85°– 95° F.
Warm	95°–100° F.
Hot	100°–110° F.

WET PACK. Wrap patient in a wet sheet and roll up in a blanket. After twenty to thirty minutes remove the pack, rub dry, and anoint with oil or ointment. Useful to remove the scales in psoriasis and to diminish hyperæmia.

MEDICATED BATHS. To an ordinary bath-tubful, say thirty gallons of water, add for

Bran bath	2 to 6 pounds bran.
Potato-starch bath	1 pound starch.
Gelatin bath	1 to 3 pounds gelatin.
Linseed "	1 pound linseed.
Marshmallow bath	4 pounds marshmallow.
Size bath	2 to 4 pounds size.

These baths are useful in erythematous, itchy, and scaly diseases. In using bran it should be tied up in cheese-cloth bags before being put in the water.

For an *alkaline* bath add to bath,

Bicarbonate of soda	2 to 10 ounces, or
Carbonate of potassium	2 to 6 " or
Borax	3 "

These baths are useful in eczema, psoriasis, urticaria, prurigo, and pruritic diseases.

For an *acid* bath add to bath,

Nitric acid	1 ounce, or
Muriatic acid	1 "
Or may use of each	½ "

Of use in chronic pruritic diseases.

IODINE BATH:

	To bath.
Iodine	½ to 1 drachm.
Iodide of potassium, vel	½ ounce.
Liquor potassæ	1 to 2 ounces.
Glycerin	2 "

Useful in scrofulous and squamous diseases.

BROMINE BATH:

	To bath.
Bromine	20 drops.
Iodide of potassium	2 ounces.

Same indications as iodine bath.

	To bath.
Sulphuret of potassium	2 to 4 ounces.

Used in scabies, chronic eczema, lichen, and psoriasis.

STARTIN'S COMPOUND SULPHUR BATH:

	To bath.
Precipitated sulphur	2 ounces.
Hyposulphite of soda	1 ounce.
Water	1 pint.

Same indications as the sulphuret of potassium bath.

MERCURIAL BATH:

	To bath.
Bichloride of mercury	3 drachms.
Hydrochloric acid	1 drachm.
Water	1 pint.

Used in pityriasis rubra and the syphilides.

B. FOR INTERNAL USE.

1. TURPENTINE EMULSION:

℞. Ol. terebinthinæ, ♏x–xxx; 0.66–2
Ol. limonis, ♏ij; 1
Mucilag. acaciæ, ℥ss; 16
Aquæ destil., ℥ss; 16 M.

Sig. A teaspoonful three times a day immediately after meals. One quart of barley-water to be drunk during twenty-four hours. (Crocker.)

Used in psoriasis, eczema, and hyperæmias.

2. MIXED TREATMENT:

a. ℞. Hydrarg. bichlor., gr. j–iij; .06–.2
Potass. iodid., ʒiv–viij; 16–32
Tinct. cinchon. co., ʒiijss; 112
Aquæ destil., ℥ss; 16 M.

Sig. One drachm in water t. i. d. one hour after meals. (Taylor.)

b. ℞. Hydrarg. biniod., gr. ss–ij; 0.03–.13
Ammon. iodid., ℥ss; 2
Potass. iodid., ℥ij–℥j; 8–32
Syr. aurant. cort., ℥jss; 48
Tinct. aurant. cort., ℥j; 4
Aquæ destil., ad ℥iij; ad 100 M.

Sig. One-half ounce t. i. d. after meals. (Keyes.)

c. ℞. Hydrarg. bichlor. vel Hydrarg. biniod., gr. j–ij; 0.06–.13
Potass. iodid., ℥j–ij; 4–8
Inf. gent. co. vel Syr. sarsaparillæ co., ad ℥iv; ad 128 M.

Sig. One drachm t. i. d. after meals.

These three are used in syphilis.

3. ℞. Pil. hydrarg., gr. xl; 2.66
Ferri sulphat. exsic., gr. xx; 1.33
Ext. opii, gr. v; .33 M.

Div. in pil. No. xl.

Sig. One t. i. d. (Taylor.)

Used in syphilis. Sulphate of quinine may be substituted for the iron.

4. ℞. Ol. gurjun., ℥j; 33.33
Liquor calcis, ℥iij; 100 M.

Sig. One-half ounce twice a day.

Used in leprosy.

5. ℞. Tinct. cannabis indicæ, ♏x–xxx; 0.66–2
Pulv. tragacanth. co., gr. x; .66
Aquæ destil., ad ℥j; ad 32 M.

Used in pruritus and prurigo. (Bulkley.)

6. Startin's Mixture:

℞. Magnesii sulphat., ℥vj–xij; 20–30
Ferri sulphat., ℥j; 3
Acid. sulphur. dil., ℥ij; 6
Syr. pruni virgin., ℥j; 24
Aquæ destil., ad ℥iv; ad 100 M.

Sig. One drachm t. i. d. after meals, through a tube. As a laxative and tonic.

7. Asiatic Pills:

℞. Acid. arsenosi, gr. xj; .75
Pulv. pip. nigræ, ℥iss; 6
Gummi acaciæ, gr. xxij; 1.50
Pulv. althæ rad., gr. xxx; 2
Aquæ destil., q. s.; q. s. M.

Div. in pil. No. c.

Sig. One to three pills a day after meals, and increase to tolerance.

Used in psoriasis.

8. ℞. Hydrarg. chlor. mitis, gr. jss; | 096
Ferri lactatis, gr. iij; | 192
Sacch. alb., gr. xv; 1 M.
Ft. in pulv. No. x.
Sig. One to four daily. (Monti.)
Used in infantile syphilis.

C. FOR EXTERNAL USE.

a. Caustics.

1. *Cosme's Paste:*

℞. Acid. arsenosi, gr. x; | 66
Hydrarg. sulphuret. rub., ℥ss; 2
Ungt. rosæ vel } | 16
Sacch. alb., } ℥ss;

To destroy epithelioma or other new growths.

2. *Marsden's Paste:*

℞. Pulv. acid. arsenosi, 2 parts by weight.
Pulv. gummi acaciæ, 1 part " "
Mix with a twenty per cent. solution of cocaine to form a paste just before using, and apply to not more than one square inch at a time.

Same indications as Cosme's Paste.

3. *Bougard's Paste:*

℞. Wheat flour, } āā 60 parts.
Starch, }
Arsenic, 1 part.
Cinnabar, } āā 5 parts.
Sal ammoniac, }
Corrosive sublimate, ½ part.
Sol. chlor. of zinc @ 52°, 24⅝ parts. M.

Grind first six ingredients to a fine powder, then mix them in a mortar. Add solution of zinc chloride slowly stirring. Keep in earthen jar. May add cocaine up to 20 per cent. to allay pain.

Sig. Apply accurately to part; keep on for thirty hours; follow with poultice.

4. *Depilatory Paste:*

℞. Barii sulphid., ℥ij; | 8
Zinci oxidi, } āā ℥iij; | 12 M.
Amyli, }

Make into a paste with water and apply a thin coating for ten to fifteen minutes, then clean off and apply a bland ointment.

5. *Salicylic Acid* (Crocker):

℞. Glycerini, ℥j; 32
Acid. salicyl., q. s.; q. s. M.

Make in consistency of thick cream. To lessen painfulness of application may add

℞. Ac. carbolici vel Creosoti, ℥j; 4 M.

Used to destroy warts, lupus, and epidermic thickenings.

6. *Vienna Paste:*

℞. Calcis, Potassæ, āā p. æ. M.

Make into a paste with alcohol just before using.

Used in lupus and scrofulides.

7. *Canquoin's Paste:*

℞. Zinci chlor., Ammon. chlor., āā ℥j; āā 4
Pulv. amyli, ℥jss; 6
Aquæ destil., q. s.; q. s. M.

Make into a paste at time of using.

Used to destroy lupus, epithelioma, and the like.

8. *Middlesex Hospital Paste:*

℞. Zinci chlor., Liq. opii sed., āā ℥iv; āā 8
Amyli, ℥jss; 6
Aquæ destil., ℥j; 32 M.

Same indications as Canquoin's paste.

9. ℞. Zinci nitrat., 1 part.
Micæ panis, 2 parts. M.

Mix before using.

b. Lotions.

1. *Belladonna Lotion:*

℞. Tinct. belladon., Glycerini, āā 1 part.
Aquæ destil., 8 parts. M.

For erysipelas. (Piffard.)

2. *Bismuth Lotion:*

℞. Bismuth. subnitrat., gr. vijss; 5
Zinci oxidi, ℥ss; 2
Glycerini, ♏xv; 1
Hydrarg. bichlor., gr. ¼; 016
Aquæ rosæ, ℥j; 32 M.

For rosacea and hyperæmic conditions.

8. ℞. Hydrarg. chlor. mitis, gr. jss; 0096
Ferri lactatis, gr. iij; 0192
Sacch. alb., gr. xv; 1 M.
Ft. in pulv. No. x.
Sig. One to four daily. (Monti.)
Used in infantile syphilis.

C. FOR EXTERNAL USE.

a. Caustics.

1. *Cosme's Paste:*

℞. Acid. arsenosi, gr. x; 66
Hydrarg. sulphuret. rub., ʒss; 2
Ungt. rosæ vel } ʒss; 16
Sacch. alb., }

To destroy epithelioma or other new growths.

2. *Marsden's Paste:*

℞. Pulv. acid. arsenosi, 2 parts by weight.
Pulv. gummi acaciæ, 1 part " "
Mix with a twenty per cent. solution of cocaine to form a paste just before using, and apply to not more than one square inch at a time.

Same indications as Cosme's Paste.

3. *Bougard's Paste:*

℞. Wheat flour, } āā 60 parts.
Starch, }
Arsenic, 1 part.
Cinnabar, } āā 5 parts.
Sal ammoniac, }
Corrosive sublimate, ½ part.
Sol. chlor. of zinc @ 52°, 245 parts. M.
Grind first six ingredients to a fine powder, then mix them in a mortar. Add solution of zinc chloride slowly stirring. Keep in earthen jar. May add cocaine up to 20 per cent. to allay pain.
Sig. Apply accurately to part; keep on for thirty hours; follow with poultice.

4. *Depilatory Paste:*

℞. Barii sulphid., ʒij; 8
Zinci oxidi, } āā ʒiij; 12
Amyli, } M.
Make into a paste with water and apply a thin coating for ten to fifteen minutes, then clean off and apply a bland ointment.

5. *Salicylic Acid* (Crocker):

℞. Glycerini, ℥j; 32
Acid. salicyl., q. s.; q. s. M.

Make in consistency of thick cream. To lessen painfulness of application may add

℞. Ac. carbolici vel Creosoti, } ℥j; 4 M.

Used to destroy warts, lupus, and epidermic thickenings.

6. *Vienna Paste:*

℞. Calcis, Potassæ, } āā p. æ. M.

Make into a paste with alcohol just before using.

Used in lupus and scrofulides.

7. *Canquoin's Paste:*

℞. Zinci chlor., Ammon. chlor., } āā ℥j; āā 4
Pulv. amyli, ℥jss; 6
Aquæ destil., q. s.; q. s. M.

Make into a paste at time of using.

Used to destroy lupus, epithelioma, and the like.

8. *Middlesex Hospital Paste:*

℞. Zinci chlor., Liq. opii sed., } āā ℥iv; āā 8
Amyli, ℥jss; 6
Aquæ destil., ℥j; 32 M.

Same indications as Canquoin's paste.

9. ℞. Zinci nitrat., 1 part.
Micæ panis, 2 parts. M.

Mix before using.

b. LOTIONS.

1. *Belladonna Lotion:*

℞. Tinct. belladon., Glycerini, } āā 1 part.
Aquæ destil., 8 parts. M.

For erysipelas. (Piffard.)

2. *Bismuth Lotion:*

℞. Bismuth. subnitrat., gr. vijss; 5
Zinci oxidi, ℥ss; 2
Glycerini, ♏xv; 1
Hydrarg. bichlor., gr. ¼; 016
Aquæ rosæ, ℥j; 32 M.

For rosacea and hyperæmic conditions.

3. *Calamine Liniment:*

℞. Pulv. calamin.,	gr. xl;	2 66	
Zinci oxidi,	ʒss;	2	
Linimenti calcis,	ʒj;	32	M.

For erythema, eczema, and hyperæmic conditions.

4. *Calamine Lotion:*

℞. Pulv. calamin.,	gr. xx;	2	
Zinci oxidi,	ʒss;	3	
Glycerini,	ʒss;	20	
Aq. calcis,	ʒvj;	36	
Aq. rosæ,	ad ʒiv;	ad 200	M.

For erythema and eczema. (Bulkley.)

5. *Carbolic Acid Lotion:*

℞. Acid. carbol.,	ʒj;	4	
Alcoholis, Aquæ destil.,	āā Oss;	āā 250	M.

For erysipelas. (White.)

6. *Carron Oil:*

℞. Aq. calcis, Ol. olivæ vel Ol. lini,	Equal parts.	M.

For burns.

7. *Coster's Paint:*

℞. Iodini,	ʒj ij;	4-8	
Ol. picis liquidæ,	ʒj;	30	M.

8. *Fox's C. C. C. Mixture:*

℞. Chrysarobin., Ol. cadini,	āā 2 parts.	
Acid. carbolici,	1 part.	
Acid. oleici,	50 parts.	M.

For psoriasis.

9. *Hardaway's Lotion for Lichen Planus:*

℞. Sapo. olivæ præp.,	ʒiv;	100	
Ol. rusci, Glycerini,	āā ʒj;	āā 25	
Ol. rosmarini,	ʒjss;	4	
Alcoholis,	ad ʒviij;	ad 200	M.

10. *Kaposi's Tar Lotion:*

℞. Ol. rusci,		50 parts.	
Ætheris sulphuris, Alcoholis,	āā	75 "	
Filtra et adde			
Ol. lavandulæ,		2 "	M.

Used in psoriasis.

11. *Kummerfeld's Lotion:*

℞. Spts. camphoræ, Spts. lavandulæ.	āā	℥ss;	āā 2
Sulph. præcip.,		gr. xv;	1
Aq. colognіensis,		℥j;	4
Aquæ destil.,		℥ij;	60 M.

For cosmetique.

12. *Liquor Picis Alkalinus:*

℞. Picis liquidæ,	℥ij;	64
Potass. causticæ,	℥j;	32
Aquæ destil.,	℥v;	20 M.

Dissolve the potassa in the water and add slowly the tar in a mortar with friction.

For chronic eczema, or, diluted ten to twenty times, for acute eczema.

13. *Lotio Alba:*

℞. Potassæ sulphurat., Zinci sulphat.,	āā	℥j;	āā 4
Aquæ rosæ,		ad ℥iv;	ad 128 M.

For acne and rosacea.

14. *Lotio Ac. Boracis:*

℞. Ac. boracis,		℥iv vel q. s.;	16
Ætheris sulph. methyl.,		℥v.;	160
Spts. vini rect.,		ad ℥xx;	ad 640 M.

For ringworm, after washing with hot water and soap, and drying. (A. Smith.)

15. *Lotio Plumbi et Opii:*

℞. Liq. plumbi subacetat. dil., Tinct. opii,	āā	℥j;	āā 32
Aquæ destil.,		ad Oj;	ad 500 M.

For acute inflammatory conditions.

16. ℞. Naphtoli, gr. xv; 1
Spts. sapo. viridis, ℥vj; 25
Alcoholis, ℥jss; 50
Bals. peruv., gtt. xxx; 2
Sulph. loti, ℥ijss; 10 M.

For sycosis. (Kaposi.)

17. ℞. Amyli glycerolis, } āā 100 parts.
Ol. cadini, }
Sapo viridis, 5 " M.

For psoriasis. External use.

18. *Piffard's Substitute for Tar:*

℞. Ac. salicyl.,	gr. x–xxx;	0.66–2	
Ol. lavandulæ,	℥ijss;	10	
Ol. citronellæ,	℥ss;	2	
Ol. pini sylvestris,	℥ij;	64	
Ol. ricini,	℥jss;	48	M.

For eczema capitis.

19. ℞. Sodii hypophosphitis, ℥j; 30
Glycerini, ℥ss; 15
Aquæ destil., ℥viij; 250 M.

For dermatitis venenata. (Morrow.)

20. *Sulphur Lotion:*

℞. Sulphuris loti,			
Alcoholis,			
Ætheris,	āā ℥ij;	āā 8	
Glycerini,			
Potass. carb.,			
Aq. rosæ,	℥vij;	250	M.

Used in acne.

21. *Thymol Lotion:*

℞. Thymol., }	āā ℥j;	āā 4	
Liq. potassæ, }			
Glycerini,	℥ss;	15	
Aq. sambuci,	℥viij;	250	M.

For seborrhœa sicca capitis. Also for pruritus cutaneus, with double the amount of thymol.

22. *Tinctura Saponis Viridis*

℞. Sapo. viridis, } Equal parts. M.
Alcoholis, }

23. *Tinct. Saponis Co. of Hebra:*

℞. Ol. cadini,			
Sapo. viridis,	āā ℥j;	āā 32	
Alcoholis,			
Filtra et adde			
Spts. lavandulæ,	℥ij;	8	M.

Stimulant in chronic eczema.

24. *Vleminckx's Solution:*

℞. Calcis vivæ, ʒiv; 16
Sulphur. sublimat., ʒj; 32
Aq. destil., ʒx; 320 M.

Boil together with constant stirring until the mixture measures six fluid ounces, then filter.

Useful in scabies, psoriasis, and acne.

25. ℞. Zinci oxidi, ʒiv; 16
Ac. carbol., ʒj; 4
Aquæ calcis, Oj; 500 M.

For dermatitis venenata. (White.)

c. Ointments.

1. *Bassorin Paste:*

℞. Bassorin, 48 parts.
Dextrin, 25 "
Glycerin, 10 "
Water, ad 100 " M.

2. *Gelatin Paste* (Unna):

℞. Zinci oxidi, 30 parts.
Gelatini, 30 "
Glycerini, 39 "
Aquæ destil., 10 " M.

Heat in water bath before using.

As a protective dressing and excipient.

3. *Bismuth Ointment:*

℞. Bismuthi subnit., Kaolini, āā ʒjss; āā 7.5
Vaselini, ʒvj ad ʒjss; 30 M.

For chloasma. (Unna.)

4. ℞. Ac. borici, gr. x; 6
Ac. salicylici, gr. xv; 1
Ungt. aquæ rosæ, ʒj; 30 M.

For chromidrosis. (Van Harlingen.)

5. *Chrysarobin Ointment:*

℞. Chrysarobin., gr. l; 3
Ac. salicylici, gr. x; 6
Plasment. vel Adipis, ʒj; 30 M.

Used in psoriasis and ringworm.

6. ℞. Chrysarobin., Ichthyol., } āā gr. lxxv; āā 5
Ac. salicyl., gr. xxx; 2
Ungt. simpl., ℥iij; 100 M.
Used in leprosy. (Unna.)

7. *Diachylon Ointment* (Hebra):
℞. Ol. olivæ, ℥xv; 480
Plumbi oxidi, ℥iij ℥vj; 120
Boil together to a good consistence and add
Ol. lavandulæ, ℥ij; 8
M.

8 ℞. Hydrarg. ammon., Bismuthi subnit., } āā ℥j; āā 4
Ungt. aq. rosæ, ℥j; 30 M.
Used in lentigo. (Hardaway.)

9. ℞. Hydrarg. ammon., gr. xx–xl; 5–10
Hydrarg. chlor. mitis, gr. xl–lxxx; 10–20
Vaselini, ℥j; 100 M.
Used in seborrhœa sicca capitis and pityriasis capitis. (Bronson.)

10. ℞. Hydrarg. bichlor., gr. j–v; 0.2–1
Ac. carbol., gr. xx; 4
Ungt. zinci oxidi, ℥j; 100 M.
Used in lichen ruber. (Unna.)

11. ℞. Ac. salicylici, gr. x; 66
Ungt. hydrarg. ox. rub., ℥j; 4
Ungt. aquæ rosæ, ℥vj; 24 M.
For blepharitis. (Webster.)

12. ℞. Hydrarg. protiodid., gr. v–xv; 0.33 1
Hydrarg. ammon., gr. x–xxx; 0.66–2
Ungt. simplicis, ℥j; 32 M.
Used in acne. (Duhring.)

13. ℞. Ungt. lanæ, ℥ijss; 10
Ac. acetici, ℥ij gr. xlv; 11
Adipis benzoat., ℥ijss; 10
Sulph. præcip., gr. xlv; 3 M.
Used in acne. (Unna.)

14. ℞. Hydrarg. sulph. rubri, gr. xv; 1
Sulph. sublimat., ℥vj; 24
Adipis, ad ℥iij; ad 75
Ol. bergamot., q. s.; q. s. M.
Used in sycosis. (Behrend.)

15. ℞. Ungt. diachyli (Hebra), } āā ʒjss; āā 50
Ungt. zinci oxidi, }
Ungt. hydrarg. ammon., ʒiij; 10
Bismuthi subnitrat., ʒjss; 5 M.

For sycosis. (Robinson.)

16. *Lassar's Paste:*

℞. Zinci. oxidi, } āā ʒij; āā 8
Amyli, }
Vaselini, ad ʒiv; ad 32 M.

As a protective application and as an excipient for other drugs.

17. ℞. Zinci oxidi, 40 parts.
Creta præparat., } āā 20 "
Liquor plumbi, }
Ol. lini, }

Mix the first two together, and the last two together, and add one part to the other.

Use as a protective in eczema. (Unna.)

18. *Naphtol Ointment:*

℞. β-naphtol., ʒiij gr. xl; 15
Creta præparat., ʒijss; 10
Sapo. viridis, ʒjss; 50
Adipis, ad ʒiij; ad 100 M.

Used in scabies. (Kaposi.)

19. *Naphtol Ointment:*

℞. β-naphtol., 10 parts.
Sulph. præcip., 50 "
Vaselini, } āā 25 "
Sapo. viridis, } M.

Used in acne. (Lassar.)

20. ℞. Ac. salicylici, 2–3 parts.
Sulphur. præcip., 10–15 "
Lanolini, 70 "
Vaselini, 18 "

For chromophytosis. (Brocq.)

21. ℞. Sulphur., ʒj; 32
Potass. carb., ʒij; 8
Adip. benzoat., ʒv; 160
Ol. chamomilis, ʒss; 2 M.

Used in scabies. (Wilson.)

22. *Helmerich's Ointment:*

℞. Sulphur., ʒij; 30
Potass. carb., ʒj; 15
Adipis, ʒviij: 250. M.

Used in scabies.

23. *Wilkinson's Ointment* (Hebra):

℞. Sulphuris, Ol. cadini,	āā ℥ss;	āā 16	
Sapo. viridis, Adipis,	āā ℥j;	āā 32	
Creta præparat.,	℥ijss;	10	M.

Used in scabies.

24. ℞. Ol. fagi, Flor. sulph., āā ℥ijss; āā 10
Pulv. cretæ alb., ℥j; 4
Adipis, Sapo. viridis, āā ℥v; āā 20 M.

For sycosis. (H. Hebra.)

25. ℞. Ol. cadini, Zinci oxidi, āā ℥ss-j; āā 2-4
Ungt. aquæ rosæ, ℥j; 30 M.

For chronic eczema.

26. ℞. Zinci oxidi, Zinci carbonat., āā ℥j; āā 4
Ungt. aq. rosæ, ad ℥j; ad 32 M.

For sycosis after shaving. (T. Fox.)

27. ℞. Terræ siliceæ, gr. xx; 1 33
Zinci oxidi, ℥ij; 8
Adipis benzoat., ad ℥j; ad 32
(Unna.)

28. ℞. Terræ siliceæ ℥ss; 2
Sulphur. præcipitat., ℥ij; 8
Zinci oxidi, ℥iss; 6
Adipis benzoat, ad ℥j; ad 32
(Unna.)

d. Miscellaneous.

1. *Anti-pruritic Powder:*

℞. Camphori,	℥ss;	3	
Zinci oxidi,	℥ij;	15	
Amyli,	℥iv;	30	M.
		(Bulkley.)	

2. *Corn Remedy:*

℞. Ac. salicylici,	gr. xv;	1	
Ex. cannabis indicæ,	gr. viij;	5	
Alcoholis,	♏xv;	1	
Ætheris,	♏xl;	2 66	
Collodion flex.,	♏lxxv;	5	M.

Apply with brush three times a day for a week. Soak feet and pick out corn. (Vigier.)

3. *Epilating Stick:*

℞. Ceræ flavæ,	ʒiij;	12	
Laccæ in tabulis,	ʒiv;	16	
Picis burgundicæ,	ʒx;	40	
Gummi damar.,	ʒjss;	48	M.

Make in stick one-half to one inch in diameter and two inches long. (Bulkley.)

4. *Glycerin Jelly:*

℞. Gelatini,	gr. xxv;	1	66
Glycerini,	gr. ccxxv;	15	
Aquæ destil.,	ʒiv;	16	M.

5. *Glycerole of Subacetate of Lead:*

℞. Plumbi acetat.,	gr. cxx;	8	
Plumbi oxidi,	gr. lxxxiv;	6	
Glycerini,	ʒj;	32	M.

Digest the lead in the glycerin heated to 300° F. in an oil bath for half an hour, constantly stirring. Filter in a chamber heated to 300° F.

Dilute from three to seven times with water and glycerin, and use as astringent and sedative in chronic eczema. (Squire.)

6. *Unna's Superoxide of Soda Soap:*

℞. Superoxide of soda,	5 to 20 per cent. in
Liquid paraffin,	30 parts,
Fully dried-out soap,	70 "

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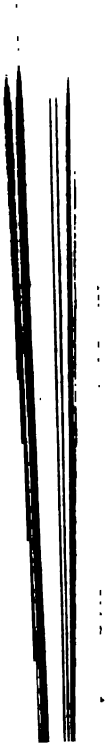

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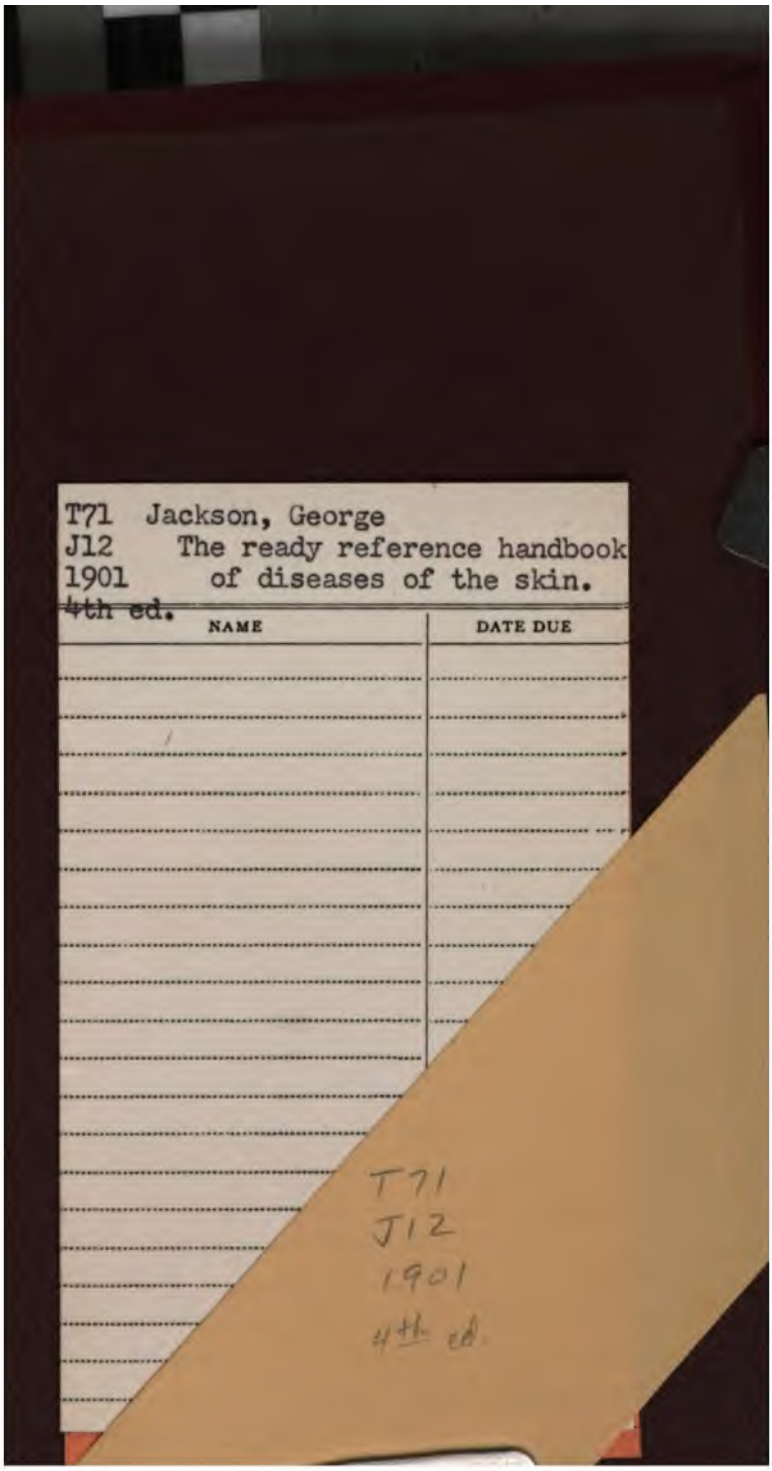
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